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Dr. Kiran Kumar K. S.

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EDITORIAL

Education serves as the cornerstone of human development, adapting and evolving to meet the challenges of our dynamic world. It is with great pleasure and anticipation that I welcome participants, researchers, educators, and thought leaders to the 2nd International Conference on "*New Trends & Modern Approaches in Education.*"

This conference provides a unique platform for dialogue, collaboration, and exploration of innovative ideas. In an era defined by technological advancements, global interconnectivity, and diverse learning needs, education demands a forward-thinking approach. The theme of this year's conference resonates deeply, urging us to embrace emerging trends and modern methodologies that foster inclusive, effective, and transformative learning experiences.

In order to promote equitable learning and to improve the academic outcomes, the new teaching strategies to be implemented in the teaching learning process. The strategies are used to inspire creativity and success in the classroom. Innovative teaching strategies don't always mean introducing the latest and greatest technology into the classroom. Instead, innovative teaching is the process of proactively introducing new teaching strategies and methods into the classroom. Inclusive Learning & Special Education

As we embark on this intellectual journey together, we aim to inspire critical discussions around topics like digital transformation in classrooms, adaptive learning techniques, interdisciplinary education, and the role of artificial intelligence in shaping future pedagogies. We believe that such conversations will not only enrich our understanding but also empower us to implement strategies that create meaningful impacts within our educational systems.

I extend my heartfelt gratitude to the esteemed speakers, panelists, and contributors who have lent their expertise and insights to this gathering. My appreciation also goes to the organizing team, whose dedication and hard work have made this event a reality.

Let this conference serve as a beacon of progress and innovation in education, reminding us of our shared commitment to nurturing the minds and talents of future generations. Together, let us reimagine education for a better tomorrow.

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TEACHERS' UNDERSTANDING OF SCIENCE PROCESS SKILLS IN PRIMARY SCIENCE TEACHING PRACTICE IN BANGLADESH: RURAL AND URBAN PERSPECTIVES

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Abstract

Developing science process skills is one of the core aspects of science teaching-learning. However, the lack of teachers' understanding of science process skills is a common query in effective science teaching practice. This study therefore explored teachers' understanding of science process skills in primary science teaching practice in Bangladesh. Data were collected through lesson observation, semi-structured interviews, focus group discussions, and document analysis from purposively selected four primary science teachers of rural and urban areas in Bangladesh following a multiple case study approach. Each teacher, his/her aligned students, and three concerned stakeholders (Assistant Upazila Education officers, instructors of Upazila Resource Center, and Primary Teachers Training Institutes) are considered as a case. The relevant primary science textbooks (TB) and teacher's editions (TE) were also considered data sources. Data for the rural and urban cases were analyzed through qualitative content analysis and thematic analysis. The findings reveal that teachers mostly have some understanding of science process skills in primary science teaching practice. The findings also indicate that concerned stakeholders somewhat understand science process skills. However, teachers get professional support from the concerned stakeholders and curriculum documents (e.g., TE, TB). Besides adding value to the existing literature in science education, the findings are significant for the stakeholders (e.g., curriculum developers, policymakers, teacher trainers, and researchers) from the Ministry of Primary and Mass Education (MoPME), Directorate of Primary Education (DPE), National Curriculum and Textbook Boards (NCTB), and National Academy for Primary Education (NAPE) to improve primary science teaching practices.

Keywords: Primary science teaching practice, primary science teachers' understanding, science process skills.

Introduction

Science Process Skills (SPKs) are integrated with 21st-century skills (Care & Griffin, 2015). The development of SPS is considered essential for a better understanding of science content (Kruit et al., 2018; OECD, 2017). Science process skills are defined as certain abilities and competencies that help to learn science (Akinbobola & Afolabi, 2010). A proposal classified SPS under two main categories– namely the basic science process skills (BSPSs) and integrated science process skills (ISPSs)–whereas BSPSs are to be considered as the necessary building block for the ISPSs (Chabalengula et al., 2012; Padilla, 1990; Rezba et al., 2007). BSPSs are observing, inferring, measuring, communicating, classifying, and predicting which form the foundation of science learning and include skills that all science learners must acquire (Padilla, 1990; Rezba et al., 2007). ISPSs are controlling variables, interpreting data, formulating hypotheses, defining operationally, and experimenting to formulate models (Chabalengula et al., 2012; Padilla, 1990). Science education reforms (American Association for the Advancement of Science [AAAS], 1993) and National Science Education Standards (National Research Council [NRC], 1996) emphasize the teaching of SPS in K-12 science classrooms. Comprehending the importance of SPSs researchers suggested that generally BSPSs can be acquired from the elementary school period and ISPSs can begin to be acquired in secondary school (Ergin et al., 2005; Nevin & Mustafa, 2010). In Bangladesh, development of students' SPS is one of the major elements in the national science curriculum from primary to secondary education (NCTB, 2012). Teachers should develop students' SPSs (Miles, 2010). However, the role of teachers in facilitating the development of quality science education through SPS practices in the classroom is noteworthy. Many

studies truly emphasize teachers' understanding of SPS for improving the quality of science education (Harlen, 1999). Moreover, students' attitudes toward science increase when teachers focus on students' SPS through inquiry-based teaching (Kim, 2007). Some researchers have noted that learners learn more and better science when teachers recognize the relationship between science contents and processes (Novak & Gowin, 1984). Therefore, science teachers must be proficient in SPS and should possess a strong knowledge, competencies, and understanding to teach the SPS effectively and meaningfully to learners (Settlage & Southerland, 2007; Chabalengula et al., 2012). However, teachers should cognitively understand these skills for students to gain these basic and integrated skills at a desired level (Mutisya et al., 2013). Learners harbor alternative/ misconceptions about science concepts if teachers are not well-aligned with SPS (Ball & McDonald, 1989; Keraro et al., 2004).

The primary science curriculum of Bangladesh has emphasized SPSs in primary science teaching-learning (National Curriculum and Textbook Board [NCTB], 2012). Therefore, there is a need to know the practice of SPS in primary science teaching-learning. However, studies found that BSPSs are practiced to some extent whereas the ISPSs are highly neglected at the junior secondary level (Islam, 2011). However, Teachers' Edition suggested attaining students' SPSs by conducting inquiry-based teaching-learning activities (NCTB, 2023). Therefore, this study intends to explore teachers' understanding of SPS in primary science teaching practice in Bangladesh.

Problem statement

Hasan et al. (2021) found that teachers did not emphasize providing opportunities for students to attain SPSs. Islam et al. (2020) identified that teachers placed less emphasis and gave less opportunity to the achievement of students' SPS for inquiry-based teaching-learning activities and conducting science classes in traditional methods. Khan et al. (2016) found that SPS is not being practiced though the primary curriculum suggests, it is not very helpful in promoting scientific literacy and teachers have a lack of pedagogical knowledge related to SPS. The study of Islam (2011) explored that BSPSs are practiced to some extent whereas the ISPSs are highly neglected at the junior secondary level. Therefore, it is important to explore teachers' understanding of SPS fin primary science teaching practice in Bangladesh.

Purpose and Research question of the study

The purpose of the study is to explore the primary science teachers' understanding of SPSs in primary science teaching practice in Bangladesh. The following research question guides the research,

- How do primary science teachers of Bangladesh understand the science process skills in primary science teaching practice in Bangladesh?

Methodology

Research Design

Teachers understanding of science process skills in the primary science teaching practice has been explored. Hence the study followed an exploratory multiple-case study qualitative approach to understand in-depth phenomena as it allowed us to understand and interpret phenomena in natural settings in terms of the meanings people attributed to them (Denzin & Lincoln, 2018). Four case studies provide enough opportunities to recognize themes of the case and cross-case theme analysis (Creswell & Poth, 2018) and allow the study to explore the comparison within and among the cases to maximize validity (Yin, 2018). In line with the understanding, multiple data sources were selected purposively to get available needed information (Creswell & Creswell, 2018); such as primary science teachers (T1, T2, T3, & T4), curriculum documents (Textbooks and Teacher's edition), concerned stakeholders

(AUEO, instructors of PTI, and URC), and concerned students that evidence the boundaries between a phenomenon and its context (Yin, 2018).

Data sources and participants

Four primary schools in four different regions from rural and urban areas of Bangladesh were purposively selected as sampling areas. One teacher from one selected primary school was considered as a case or unit of analysis. Four classes of each teacher were observed with follow-up interviews, and after that lessons were analyzed from documents (Textbooks, and Teacher's edition). Four cases were selected here and the following concerns shaped each case,

- Primary science teachers (Who teach science)
- Curriculum documents (Textbooks, Teacher's guide)
- Assistant Upazila Education Officer (AUEO)
- Upazila Resource Center Instructor (URC Instructor)
- Primary Teachers Training Institute instructor (PTI Instructor)
- Concerned students

Instruments and data collection process

Lesson observation, in-depth one-to-one semi-structured interviews, and focus group discussions (FGD) techniques were used for a deeper insight into SPS in primary science teaching practice in Bangladesh). A lesson observation schedule was employed for teachers that provides a comprehensive description of teachers' behavior collected in a specific natural classroom setting (Ary et al., 2018). Two types of interview protocols were prepared for the teachers and concerned stakeholders to verify the accuracy of the observations (Fraenkel et al., 2015). Additionally, an FGD guideline was used for concerned students' views. Moreover, the study used a review of documents that support other collected data as a means of triangulation (Yin, 2018). Experts justified the instruments in terms of language, clarity, and validity to finalize the instruments of the study before piloting. Additionally, piloting helped to trial the appropriateness, chronology, and validity of instruments in the study.

Data Analysis

Alphanumeric code is used where alphabets represent respondent groups like T1 for Teacher 1 of Case A, PTI 2 for PTI Instructor 2 of Case B, URC3 for URC Instructor of Case C and AUEO 4 for AUE Officer of Case 4. All the data were directly recorded in Bangla and then translated into English following the conceptual translation procedure. Six-step thematic analysis process by Braun and Clark (2006) and qualitative content analysis (Patton, 2015) were used for data analysis. A cross-case analysis was made to draw the overall findings of this study. Vagias's (2006) Likert-scale technique was used to develop scales for data analysis.

Ethical consideration

The participants' informed agreement to engage in the study, repercussions and confidentiality are the three ethical factors that must be considered for conducting research (Kvale, 1996) which were precisely followed in the study. the purpose and objectives of the study were described to the participants, and written permission from the concerned authority was obtained to conduct the study. Participants were informed about the principles of voluntary participation and the freedom to withdraw at any stage without consequences (Siegle, 2023).

Results

The results presented here were designed for the research question to explore teachers' understanding of science process skills in primary science teaching practices. The results from teachers' lessons

observation, document analysis, and interviews of teachers, concerned stakeholders, and students are presented next.

Teachers' lesson practices of science process skills

The observed lessons of the study have explored teachers of four cases mostly somewhat focused on science process skills in science teaching learning in the classroom. A lesson practice of Teacher B is shown in Table 1.1 where the teacher did not focus on science process skills.

Table 1.1: Teacher's classroom activities of a lesson focusing on science process skills

Grade & Chapter	ILO	Lesson in TE	Lesson title	No. of class taken by the teacher	science process skills are given in TB	science process skills are given in the TE	Teacher's classroom activity
Grade 5, Chapter- Information in our life	11.1.1	1	Importance of information sharing	lesson-1	Prediction, communication	Prediction	Did not focus on any process skills
	11.1.1	2				Prediction, Discission making, communication	

Table 1.1 exposes that the teacher conducted two lessons (that instructed in TE) in a class and did not focus on any science process skills while conducting science teaching learning.

Table 1.2 summarizes Teachers' classroom practices of science process skills in four cases.

Table 1.2: Teachers' classroom practices of science process skills in four cases

Case A		Case B		Case C		Case D	
Chapter, Lesson & no. of ILO in Grade three	Teacher's lesson practice	Chapter, Lesson & no. of ILO in Grade five	Teacher's lesson practice	Chapter, Lesson & no. of ILO in Grade four	Teacher's lesson practice	Chapter, Lesson & no. of ILO in Grade four	Teacher's lesson practice
Chapter:5 Lesson: 1,2,3	lessons-1: somewhat practiced	Chapter:10 Lesson: 1, 2	lessons-1: did not practice	Chapter:6 Lesson: 1	lessons-1: moderately practiced	Chapter:2 Lesson: 1	lessons-1: somewhat practiced
Chapter:5 Lesson: 4,5	lessons-2: somewhat practiced	Chapter:10 Lesson: 3,4,5,6	lessons-2: did not practice	Chapter:6 Lesson: 2	lessons-2: moderately practiced	Chapter:2 Lesson: 2,3	lessons-2: somewhat practiced
Chapter:6 Lesson: 1	lessons-3: somewhat practiced	Chapter:11 Lesson: 1,2	lessons-3: did not practice	Chapter:6 Lesson: 3	lessons-3: moderately practiced	Chapter:2 Lesson: 4	lessons-3: somewhat practiced
Chapter:6 Lesson: 2	lessons-4: somewhat practiced	Chapter:11 Lesson: 3,4	lessons-4: did not practice	Chapter:6 Lesson: 4,5	lessons-4: moderately practiced	Chapter:2 Lesson: 5	lessons-4: somewhat practiced

Table 1.2 reveals that Case A and Case D teachers somewhat focused on science process skills in science teaching learning. However, the teacher of Case B did not focus and the teacher of Case C moderately focused on science process skills in science teaching learning. The table also shows that all the teachers in four cases taught multiple lessons in one class without following the TE instructions where content is divided into lessons with related teaching learning strategies. Therefore, they did not engage students in science teaching learning properly.

Stakeholders' views on science process skills

Science process skills have been defined as some abilities and competencies that help students learn science and technology (Akinbobola & Afolabi, 2010) and are considered necessary tools to produce

and use scientific information, and solve problems (Harlen, 1999). In response to the opportunities for students to achieve science process skills through science teaching-learning, the AUEO from case D (AUEO4) alluded,

> It is very important; it helps to develop students' various life skills. For example, in the activity of selecting the essential things needed for daily use from the supplied materials and separating the things related to food, students' skills of selection/classification can be developed.

According to AUEO4, students can acquire skills for their daily lives through science learning, which expresses somewhat understanding of AUEO4 because science process skills are opportunities to learn science and technology for problem-solving.

Moreover, Esler (2001) claimed that modern elementary science curricula emphasize acquiring appropriate science concepts or information and developing science process skills for doing science. The science curriculum of Bangladesh emphasizes teaching science process skills from the primary level (National Curriculum and Textbook Board [NCTB], 2012). In state to the information provided in TE and TB about the opportunities for students to achieve science process skills through science learning, the Teacher of case D (T4) said,

> I don't see TE that way, TB has given pictures of related content in almost all the content so that students can observe and understand, I try to focus on that. For example, in the lesson "Plants in Nature," TB provided pictures of plants in different habitats, and students looked at them.

The statement reveals the unawareness of T4 about curriculum documents as the science curriculum of Bangladesh emphasizes teaching science process skills from the primary level, and the textbooks clearly stated that learning activities aimed at the acquisition of science process skills necessary for children to solve problems (NCTB, 2023).

One of the aims of science teaching is to develop science process skills in classrooms (Sreedevi & Sudhir, 2011). Based on an asked question about the classroom practice of achieving science process skills through science learning, the PTI instructor of case D (PTII4) stated,

> The teacher tries to engage students with activities in the classroom, so they can develop the skills of measuring, counting, observing, etc. which they can use in their daily life.

According to PTII4 through classroom activities, students can develop some skills for their real-life activities that express PTII4's somewhat understanding of SPSs.

Table 1.3. summarizes the understanding of teachers and concerned stakeholders of case D based on their views regarding science process skills in science teaching practice.

Table 1.3: Stakeholders' understanding of science process skills in science teaching practice

Stakeholders	Stakeholders' understanding of science process skills in science teaching practice			Overall understanding
	Importance of science process skills	Given the information in TE & TB	Classroom practice of teachers	
Teacher	Do not understand	Do not understand	Do not understand	Do not understand
PTI instructor	Somewhat understand	Somewhat understand	Somewhat understand	Somewhat understand

| URC instructor | Somewhat understand | Somewhat understand | Somewhat understand | Somewhat understand |
| AUEO | Somewhat understand | Somewhat understand | Somewhat understand | Somewhat understand |

Table 1.3 reveals that the teacher does not understand the science process skills required for science teaching learning. However, concerned stakeholders have some understanding of science process skills. Table 1.4 summarizes teachers' and concerned stakeholders' understanding of science process skills based on their views on science teaching practices in four cases.

Table 1.4: Stakeholders' understanding of science process skills in four cases

Stakeholders	Stakeholders' overall understanding of science process skills in four cases			
	Case A	**Case B**	**Case C**	**Case D**
Teacher	Somewhat understand	Do not understand	Somewhat understand	Do not understand
PTI Instructor	moderate understand	moderate understand	Somewhat understand	Somewhat understand
URC instructor	Somewhat understand	Somewhat understand	Somewhat understand	Somewhat understand
AUEO	Somewhat understand	Somewhat understand	Somewhat understand	Somewhat understand

The findings of the study explore that most of the teachers and concerned stakeholders of all four cases have some understanding of science process skills.

Students' response to FGD

The findings of the FGD reveal that teachers did not focus on science process skills in the science classroom that way. In response to the asked question about the classroom practice of achieving science process skills through science learning, one student of FGD asserted,

> Usually, we do not do any activity in science classes. Our teacher reads the text by him/herself or sometimes we do it. Then write the Q-A.

The statement exposes that, T4 did not focus on science process skills in the science classroom.

Information provided in TB and TE of science process skills

At the beginning of the textbooks, it is clearly stated as "Major features of the revised primary science textbooks" that learning activities aimed at the acquisition of science process skills necessary for children to solve problems (NCTB, 2023). It is also highlighted as the enhancement of learning activities that the textbooks introduce a variety of experiments, demonstrations, observations, and investigations to promote the scientific attitude of the pupils (NCTB, 2023). Analyzing the primary science textbooks and teacher's editions it is found that, there are some activities in lessons focusing on science process skills like; demonstration, observation, experiment, investigation, and decision-making (NCTB, 2023). Snapshots taken from the textbook (Fig.1) and teacher's edition (fig.2) indicate the provided information regarding science process skills of observed lesson no.3 from Case C. Here, students are instructed to observe, measure the given activity, and communicate with others.
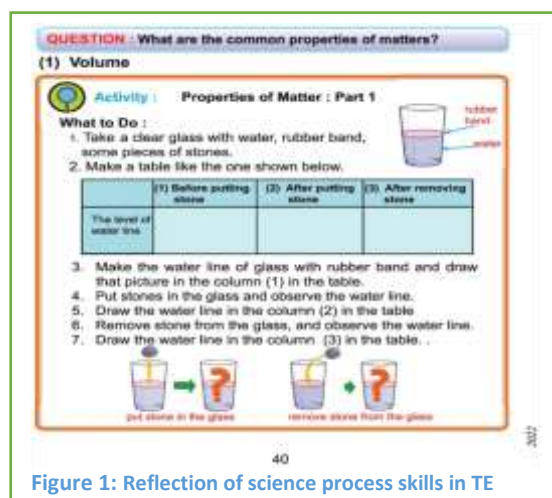
Figure 1: Reflection of science process skills in TE
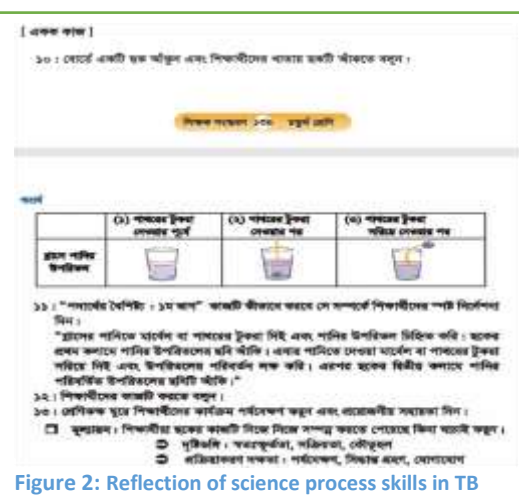
Figure 2: Reflection of science process skills in TB

Sixteen lessons of TE and TB were analyzed which were observed during lesson observation in four cases.

The following table presents a summary of findings regarding the scope of science process skills provided in the TE and the TB.

Table 1.4: Scopes of science process skills in textbooks and teacher's edition

Cases	Grade	Chapter, Lesson & no. of ILO practiced by the teacher	Instructions provided (Based on literature review)	
			In TB	In TE
Case A	Grade 3	Chapter:5; Lesson: 1,2,3	Somewhat addressed	Somewhat addressed
		Chapter:5; Lesson: 4,5	Somewhat addressed	Somewhat addressed
		Chapter:6; Lesson: 1	Somewhat addressed	Somewhat addressed
		Chapter:6; Lesson: 2	Somewhat addressed	Somewhat addressed
Case B	Grade 5	Chapter:10; Lesson: 1,2	Somewhat addressed	Somewhat addressed
		Chapter:10; Lesson: 3,4,5,6	Somewhat addressed	Somewhat addressed
		Chapter: 11; Lesson: 1,2	Somewhat addressed	Somewhat addressed
		Chapter: 11; Lesson: 3,4	Somewhat addressed	Somewhat addressed
Case C	Grade 4	Chapter:6; Lesson: 1	Somewhat addressed	Somewhat addressed
		Chapter:6; Lesson: 2	Somewhat addressed	Somewhat addressed
		Chapter:6; Lesson: 3	Somewhat addressed	Somewhat addressed
		Chapter:6; Lesson: 4,5	Somewhat addressed	Somewhat addressed
Case D	Grade 4	Chapter:2; Lesson: 1	Somewhat addressed	Somewhat addressed
		Chapter:2; Lesson: 2,3	Somewhat addressed	Somewhat addressed
		Chapter:2; Lesson: 4	Somewhat addressed	Somewhat addressed
		Chapter:2; Lesson: 5	Somewhat addressed	Somewhat addressed

The findings of Table 1.4 reveal that both the textbooks (TB) and the teacher's editions (TE) somewhat addressed the scope of science process skills.

Overall remarks on the understanding of science process skills in the primary science teaching practice

In all four cases, teachers mostly have some understanding of science process skills in the primary science teaching practice which is reflected in teachers' lesson practices as teachers mostly somewhat practiced science process skills in science classrooms. However, concerned stakeholders mostly have

some understanding of science process skills and this may be reflected in teachers' understanding and classroom practices. The instruction of science process skills provided in textbooks (TB) and teacher's editions (TE) can also be reflected in teachers' understanding and teachers' classroom practice as the information was not properly addressed.

Discussion

Teachers must understand the SPSs so that students can obtain the required proficiency (Mutisya et al., 2013). The study results of Mutisya et al. (2013) indicate that teachers' sufficient understanding of SPS helps their students to gain these skills at a desired level. However, Sukarno et al. (2013) concluded from their study that science teachers' understanding of SPSs is low and does not much differ from the students' SPS scores which indicates science teachers' understanding of SPS greatly affects student SPS development. Moreover, Rustan et al. (2020) concluded from their study that, the SPSs of students are relatively low, and one of the factors causing the lack of students' SPSs is teachers' low understanding of SPS where they have a tendency to use old methods and they rarely conduct experiments in science teaching. Researchers found in their study that elementary school teachers did not have a sufficient conceptual understanding of SPS (Chabalengula et al., 2012; Lotter et al. 2007; Türkmen & Kandemir, 2011; Yilmaz & Meral-Kandemir, 2012). Therefore, the somewhat understanding of the teachers in this study may not help their students to gain these skills at the desired level and encourage them not to practice SPSs perfectly in primary science classrooms in Bangladesh which is not very helpful in promoting scientific literacy.

According to Raj and Devi (2014) and some other research studies, SPS are the building blocks of critical thinking and inquiry in science. Settlage and Southerland (2007) also emphasize the development of SPS which provides a foundation for inquiry-based teaching. However, Sukarno et al., (2013) found that students' low understanding of SPSs at junior high school in Jambi, has an impact on the lack of student ability to perform various activities based on experiments, such as inquiry and discovery. Teachers in this study have somewhat understanding of SPSs giving students less opportunity to develop SPSs for inquiry-based teaching-learning activities and influencing them to conduct science classes in traditional methods.

Harlen (1997) identified many studies that truly emphasize teachers' understanding of SPS for improving the quality of education. The findings of Mushani (2021) indicated that SPSs are very vital skills and teachers' understanding of these skills at a higher level is enhanced quality education. Unfortunately, Mushani's findings show that teachers' understanding of these skills, especially the conceptual aspect is low. Ball & McDonald (1989) found teachers who are not well-grounded with SPS tend to possess misconceptions of scientific knowledge, and they are a significant source of learners holding alternative or misconceptions about science concepts (Keraro et al., 2004). Aiello-Nicosia et al. (1984) justifies that there's a correlation between the level of understanding and mastery of SPS among teachers with the level of students. Researchers found that science teachers' low understanding of SPS is very influential in students' SPS development process and a lack of science teachers' understanding of SPS affects effective science teaching and learning activities (Sukarno et al 2013). Teachers having somewhat understanding of SPS in this study may hinder learners' effective and meaningful science learning and may create learners' alternative/misconceptions on science concepts, which also encourages the teacher not to practice SPS in the primary science classrooms as the primary curriculum suggested.

Some researchers have found that learners learn more and better science when taught by teachers who identify the relationship between science contents and processes through SPS (Novak & Gowin, 1983,

Hipkins et al., 2002). Scharmann (1989) points out that science content and SPS should be taught together as they complement each other where SPS fosters significant increases in subject matter understanding and science content knowledge. The teachers in this study somewhat understand SPSs which may prevent learners' achievement of SPS, learners' positive attitude towards science, and did not emphasize providing opportunities for students to attain science process skills.

Moreover, Shahali et al., (2017) identified that science education methods courses at primary teacher education institutions do not appear to be extremely helpful in increasing the level of pre-service teachers' conceptual understanding of SPS. Thus, the mostly somewhat understood concerned stakeholders of this study who are engaged in teachers' professional development may not be helpful to primary science teachers and lead them to not practice SPS in the science classroom.

This study selected four primary science teachers from rural and urban areas of Bangladesh to explore the diversity of science teaching practices, but there is no noteworthy difference in teachers' understanding of science process skills.

Implications of the findings of the study

The study explores that primary science teachers mostly have some understanding of science process skills. The study also reveals that concerned supporting human resources somewhat understand SPSs, and the supporting curriculum documents somewhat addressed the information about SPSs. These results carry implications for primary science teaching practices in Bangladesh. Based on the findings of the study, several implications are presented in three categories: knowledge, policy, and practice.

Implications for Knowledge Gap

The findings imply the knowledge that is useful to almost all stakeholders like researchers, curriculum developers, policymakers, and curriculum document developers. Policymakers and science educators can consider the knowledge when taking necessary steps at the policy level to improve teachers' understanding of curriculum documents. Curriculum developers and curriculum document developers can use the findings knowledge to develop or revise curriculum documents. Moreover, the knowledge provides a clear scenario in the literature for further research.

Implications for Policy

In Bangladesh, MoPME, DPE, NCTB, and NAPE may consider the findings of the study and make changes for improvement accordingly. The Ministry of Primary and Mass Education (MoPME) can take necessary steps for the professional development of primary teachers by formatting policies. Considering the research findings, policymakers can formulate necessary policies for DPE to implement the necessary training for teachers to better understand the curriculum documents. Policymakers can develop the necessary policies for NCTB so that NCTB can take into account the findings for a better understanding of teachers. Policymakers can take necessary policies for NAPE to innovate and develop new methods of teaching-learning for better and quality primary education considering the findings of the study.

Implications for Practice

Research findings recommend implications at the practice level where educators, teachers, and learners can benefit. DPE, NAPE, PTI, URC, and school authorities all these institutions can use the findings of the study to design and implement training and other programs related to teachers' professional development. NCTB can consider the findings to develop educational materials: curriculum, curriculum documents, etc. NAPE can arrange training, seminars, and workshops for the academic staff of PTIs and other field officials who are related to teachers' professional development. UEOs, AUEOs, PTI trainers, and URCs can take the research findings into account for their professional development as

the findings reveal that concerned stakeholders who are engaged in training, monitoring and supervising teachers have some understanding of SPS. School authorities can take necessary steps for the professional development of teachers by providing them with proper training and opportunities for proper classroom practice.

Conclusion

The SPSs are essential components in science education and are considered a necessary tool for inquiry-based science teaching-learning. teachers are expected to have a good understanding of SPSs, so they can provide opportunities to their students in primary science teaching practice. Teachers without an understanding of SPS may hamper inquiry-based primary science teaching practice and students' science learning. The concerned stakeholders having somewhat understanding of SPS and the curriculum documents may prevent teachers' understanding of SPS. The study hopes that, if the concerned stakeholders understand better, and if the concerned curriculum documents are properly addressed, then the teachers will comprehend better, and this will be reflected in teachers' classroom practice and students' science learning.

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EXPLORING THE EMPHASIS ON DEVELOPING EMPLOYABILITY SKILLS AND VALUES IN BOTANY CURRICULA AT PUBLIC UNIVERSITIES IN BANGLADESH

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Abstract

Developing skills and values for employment has become a key focus of modern education, a trend also seen in Bangladesh. This shift is driven by high unemployment rates among college graduates, which reveal a significant gap between the skills graduates possess and those needed in the job market. In today's global economy, effective communication, specialized work skills, and interpersonal abilities are crucial for employability. There exists a notable disconnect between theoretical education and practical skill development, hindering graduates' readiness for employment. This study focuses specifically on Botany graduates from public universities in Bangladesh, examining the emphasis on employability skills and values in their curricula and the perceptions of various stakeholders regarding this issue. Utilizing a multiple case study approach within a qualitative framework, the research selected four Botany curricula from different universities for analysis. It was conducted in two phases: first, a review of curriculum content, followed by interviews and focus group discussions with stakeholders. The findings indicate significant variations in how botany curricula of different public universities in Bangladesh prioritize employability skills and values, highlighting the need for harmonized curricula that better align with industry requirements. The study aims to inform curriculum reforms to enhance the development of employability skills, thereby bridging the gap between educational outcomes and employer expectations. The implications of this research extend to curriculum committees, faculty, students, university administrators, policymakers, and employers, offering valuable insights for preparing Botany graduates for a dynamic job market with reformed curricula. Additionally, future researchers may benefit from a comparative understanding of employability skills across Botany curricula, guiding further investigations in this area.

Key Words: Employability skills, Botany curriculum, Higher education, Public universities in Bangladesh

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Introduction:

Dedicated employees excel in technical and professional skills, embrace emerging technologies, and demonstrate self-motivation. Actively engaging in their work fosters competence and confidence, enabling them to complete tasks effectively. These qualities are broadly termed as employability skills that address today's workplace challenges. (Elder, 2014; Llinares-Insa etal, 2018)**.** Global economic growth is increasing. However, unemployment is rising sharply in developing and less developed nations. Many regions face a lack of job opportunities for young workers. In recent year, youth unemployment rates were 30% in Northern Africa, 27% in Arab states, and 13% in Southern Asia. (IMF, 2021)**.**

Employers believe higher education institutions are responsible for developing necessary skills of the employee (Clarke, 2017). Qenani et al. (2014) argued that universities should promote culture and creativity, fostering knowledge and skills vital for students' personal and professional growth. However, numerous studies indicate that academic programs are outdated and do not meet labor market needs (Gracia, 2009; Clarke, 2017; Lan, 2018). This mismatch is evident globally, including in Bangladesh (Chowdhury & Miah, 2016).

Literature Review:

In today's competitive job market, strong communication skills are essential for graduates seeking employment. This review highlights the importance of communication, teamwork, and interpersonal

skills in enhancing employability. Employers expect graduates to excel academically while also demonstrating effective oral, written, and presentation skills (Ngah et al., 2018).

Oral communication involves spoken interactions like discussions and speeches (Wahyuni, 2018; Rahman, 2010), with teamwork and negotiation being key components (Darling & Dannels, 2003). Written communication is vital for conveying messages clearly and is crucial for academic and professional success (Malyuga et al., 2016). It encompasses various formats, requiring strong argumentation and writing management (Binkley et al., 2012). Presentation skills, necessary for engaging an audience effectively, require careful planning and practice (Dolan, 2017).

Interpersonal skills are crucial for employability and include seven key dimensions from the SA Manual (2016): teamwork, leadership, empathy, motivation, reliability, ethical appreciation, and adaptability.Teamwork is highly valued by employers and can be developed through collaborative activities (Adams, 2014; Zou & Ko, 2012). Leadership skills often emerge from extracurricular and classroom experiences (Flavin, 2019). Empathy, involving cognitive and emotional understanding, drives support for others (Decety & Jackson, 2004). Motivation, shaped by the hidden curriculum, predicts academic success (Mariani, 1999). Reliability refers to dependability and accountability, while ethical behavior is vital in educational contexts (Black et al., 2019). Lastly, adaptability is essential for effectively navigating changing situations (Wheatley, 2021).

Work skills, as outlined in the SA Manual (2017), include seven key dimensions: time management, judgment, problem-solving, data analysis, linking theory to practice, discipline, and sense of responsibility.Time management involves meeting deadlines through effective planning and prioritization (Karakose, 2015). Judgment is the capacity to make informed decisions, crucial in scientific fields (Piaget, 1997). Problem-solving combines observation with critical thinking (Rahman, 2019). Data analysis skills enable graduates to interpret data effectively, addressing real-world issues (Piercey, n.d.). Practical work helps students apply theoretical knowledge (Dillon, 2008). Discipline fosters self-control and productivity (Yusuf, 2015), while a strong sense of responsibility guides choices in educational settings (Warren, 2020).

Conceptual Framework:

Employers often express dissatisfaction with university graduates' preparedness for the workforce, particularly in oral and written communication and technical skills (Dabalen et al., 2001; Saint et al., 2003). While employers' views on employability skills are important, they do not solely determine readiness (Hager & Holland, 2007). A disconnect between curricula and employer needs hampers skills development in higher education (Tran & Swierczek, 2009). This gap highlights the necessity of aligning university programs with industry demands to better prepare graduates for the workforce.
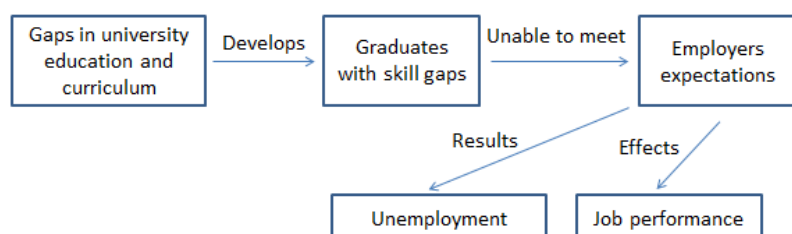
Figure 1: Schematic diagram of the conceptual framework developed by the researcher

The conceptual framework illustrates that gaps in university education and curriculum development contribute to graduates possessing various skill gaps. This discrepancy often leads to graduates

struggling to meet employers' expectations, resulting in unemployment or impacting job performance adversely.

Research problem:

Graduates in Bangladesh and abroad increasingly struggle to find meaningful employment due to gaps in the education system that fail to equip them with essential employable skills (Washer, 2007). To improve this situation, undergraduate curricula must be reformed to help graduates effectively market themselves to employers. Before the establishment of IQAC in Bangladesh, higher education lacked outcome-based curricula, underscoring the need for reforms focused on skill development (Self-Assessment Manual, 2016). Graduate unemployment not only causes individual frustration but also contributes to social imbalances (Alam & Hasan, 2015). This issue spans various fields, with employers citing declining academic standards and graduates' insufficient communication and technical skills (Saint et al., 2003). Addressing these challenges requires coordinated efforts in curriculum reform and alignment with industry demands.

Research gap:

Numerous studies have been conducted on various aspects of employability skills in Bangladesh, ranging from students' and employers' perceptions of entry-level human resources management positions (Chowdhury & Miah, 2016) to an analysis of the employability skills of business graduates in the job market, which investigates weaknesses and suggests improvements (Milon et al., 2021). Research on skills development for graduate employability, particularly focusing on the Japanese language in TVET programs, has also been published (Alam & Sharmin, 2023). Additionally, studies on the skills gap and youth employment in Bangladesh (Khatun et al., 2022) and sustainable employability skills among Bangladeshi university graduates from the employers' perspective (Hossan, 2022) have been reported. However, there is a notable absence of documented evidence regarding the emphasis on employability skills and values specifically for Botany graduates. Thus, a research gap exists that necessitates further investigation in this area.

Purpose and Research Questions:

The purpose of the study is to investigate the degree of emphasis placed on employability skills and values across various Botany departments in public universities in Bangladesh, as well as to comprehend stakeholders' perceptions regarding this issue. The research questions guiding this study are as follows:

1. To what extent is the emphasis on employability skills and values development evident in Botany curricula across public universities in Bangladesh?

2. How do stakeholders perceive the variations in emphasis on employability skills and values among the Botany curricula?

Methodology:

Strategy of inquiry: In this study we have opted for a multiple case study, facilitating detailed analysis within a qualitative framework. Qualitative research provides deeper insights into real-world issues (Moser & Korstjens, 2017). Its purpose is to comprehensively describe, evaluate, and understand specific experiences (Creswell & Poth, 2018; Tavallaei & Talib, 2010). Case study research allows extensive investigation of a topic (Stake, 1995), with multiple case studies necessary for deeper exploration (Yin, 2017).

Data source, Sample and sampling: We collected comprehensive data from various sources, employing content analysis of documents, interviews, and focus group discussions involving stakeholders (Creswell & Poth, 2018). The revised intended curricula of four Botany Departments at

public universities in Bangladesh served as our secondary data source, purposively selected. For primary data, we conducted interviews and focus group discussions with teachers and students from the selected cases, with sample selection being purposive and convenient. Qualitative sampling prioritizes appropriateness, purpose, and access to quality information over representativeness (Hillebrand et al., 2001).

Instrument: The research questions and problem of our study necessitated document analysis of the selected cases. Through this analysis, we investigated the emphasis placed on employability (communication, work, and interpersonal) skills and values within the intended Botany curriculum using a curriculum analysis framework derived from the survey questionnaire for employers in the SA Manual, 2016. This framework was constructed based on dimensions and related sub-dimensions of the quality requirements for graduate recruitment outlined in the SA Manual, 2016. Furthermore, we utilized a semi-structured interview schedule and focus group discussion guideline as primary data collection tools to validate and cross-check the findings of the document analysis (Patton, 2014). A qualitative researcher determines the relevance of a phenomenon based on participants' feedback (Creswell & Poth, 2018).

Data analysis: We utilized a Curriculum Analysis Framework for Emphasis of Skills and Values to identify the emphasis on skills and values within the curriculum. This framework also helped in recognizing the importance of skills and values in the teaching-learning and assessment systems, integral components of the curriculum. To analyze the emphasis on skills and values, four "Likert Scales" (Likert, 1931) were developed, along with explanation statements, to gauge the level of emphasis (Preston & Colman, 2000). These four scales were: Not Emphasized (NE), Less Emphasized (LE), Moderately Emphasized (ME) and Highly Emphasized (HE). The curriculum's focus on skills and values was determined from outcome statements and based on the learning outcome the content coverage was identified. Next, the identified skill emphasis was compared among the cases. Furthermore, for each of the findings, inter-rater reliability was tested for the trustworthiness of the data. Thematic analysis was employed to derive meaning from the data, organizing it into broad themes based on evidence from document analysis. Thematic analysis, known for its adaptability, facilitated qualitative data analysis by categorizing data from various sources. Interview transcripts were systematically analyzed by reading and annotating them multiple times to gain insight into relevant contexts and events. Data were then coded and organized into categories and subcategories, followed by case analysis and comparison based on research question.

Results

Skills and values were categorized into three dimensions in the Self-Assessment Manual (2016). The dimensions were 'communication skills', 'interpersonal skills' and 'work skills'. The following part represents the analysis findings for each dimension.

Emphasis for communication skills development

The Self-Assessment Manual (2016) categorized communications skills into three sub-dimensions: Oral communication, written communication, and presentation skills. In the presence of many opportunities to prepare written documents (written exams, making a lab notebook, a field notebook, field reports, written assignments, etc.) and a specific English course designed to improve written communication, HE is considered. On the other hand, because of the existence of ample opportunity for written document preparation and the absence of a specific English course designed to improve written communication, ME was considered. In contrast, the presence of less opportunity for written document submission and the absence of a specialized English course designed to improve

writing communication were viewed as LE. When the curriculum was unable to establish written communication, NE was considered.

According to the scale, HE was found in Case C's curriculum due to the presence of sufficient scope for written document preparation and the inclusion of a distinct English course to develop written communication. In Case A and D, the absence of an English course resulted in the identification of ME. Despite this, LE was discovered in Case B because to a lack of scope for written document preparation and the absence of an English course.

In the same way, looking at the conditions for the other communication skills, table 1 shows what the cases have shown about the emphasis on developing communication skills.

Table-1: Communication skills development emphasis among the cases

Dimensions of Quality	Sub-dimensions	Emphasis level among the cases			
		Case A	Case B	Case C	Case D
Communication skills	i. Oral communication	ME	LE	HE	HE
	ii. Written communication	ME	LE	HE	ME
	iii. Presentation skills	LE	LE	LE	LE

Table 1 shows that there are differences in how the graduates develop their oral, written, and presentation skills in the selected cases. Interview and FGD explored different aspects of developing communication skills in their departments with the participants. In response, the member of the teacher form Case B was saying about presentation skills, "We have included viva and presentation in our assessment system, which increases the presentation skills of students. But I think there should be more presentations to increase this skill." One of the students in FGD said, "Viva in year finals, thesis presentations, assignment presentations, and project presentations builds our presentation skills." One of the teachers of Case D in FGD was informing me about their research-based course and the skills addressed by that. He said, "The research methodology course of the master's degree for the non-thesis group is developing presentation skills, written communication skills, analytical skills, and many other skills." Students mentioned their basic problems with communication skills and said,

> We aren't very good at giving presentations. When we give our assignments, we just copy and paste from the internet. Oral presentations aren't very common. Our English and writing skills aren't very good, and we're afraid of viva and presentations. The reason behind all of these deficiencies is the deficiency of the scopes in our program.

Therefore, interview and FGD findings support the analyzed data.

Emphasis for interpersonal skills development

In the Self-Assessment Manual (2016), interpersonal skills are classified into seven sub-dimensions : 'capacity to work in teams', 'leadership', 'empathy', 'motivation ability', 'reliability', 'appreciation of ethical values', and 'adaptability'.

For example, enough scope of group activities (laboratory work, group projects, group work, field trips, study tours, and excursions) in the curriculum, teaching-learning, and assessment strategies, as well as adequate students' involvement in extra- and co-curricular activities, was considered HE in 'ability to work in teams'. In the presence of comparatively less scope when developing the skills, ME and very little scope LE were considered. Furthermore, in the absence of any scope for developing the skill, NE was considered. An analysis of the curriculum showed that Case A in the general objectives of their program mentioned training the graduates with good teamwork skills. Furthermore, their curriculum has incorporated enough opportunities, like laboratory classes, field work, distant and local excursions, group discussion, guided discussion, and project discussion, to build teamwork ability. Moreover, seven

courses in their curriculum have included some teamwork-based content to develop this skill. In addition to that, students in Case A participate in enough extra- and co-curricular activities. Therefore, HE was identified in Case A for team building. On the other hand, considering the above parameters, Case A and Case C had given ME, and Case D had given LE on developing the 'ability to work in teams'.

Similarly, considering the parameters to develop 'leadership' skills, LE was evident in all cases. Moreover, there remained many hidden components in the entire graduation program behind developing skills like empathy, motivational ability, reliability, appreciation of ethical values, and adaptability. These components are nearly impossible to measure and very difficult to compare. The table 2 represents the analysis findings for interpersonal skill development emphasis among the cases.

Table-2: Interpersonal skill development emphasis among the cases

Dimensions of quality	Sub-dimensions	Emphasis level among the cases			
		Case A	Case B	Case C	Case D
Interpersonal skills	i. Ability to work in teams	HE	ME	ME	LE
	ii. Leadership	LE	LE	LE	LE
	iii. Empathy	Hidden	Hidden	Hidden	Hidden
	iv. Motivation ability	Hidden	Hidden	Hidden	Hidden
	v. Reliability	Hidden	Hidden	Hidden	Hidden
	vi. Appreciation of ethical values	Hidden	Hidden	Hidden	Hidden
	vii. Adaptability	Hidden	Hidden	Hidden	Hidden

Table 2 represents the existence of dissimilarity among the cases in developing interpersonal skills within the graduates. The participants in the interview and focus group discussion discussed the status and scope for developing interpersonal skills in the cases. One of the teachers in Case B was discussing the development of interpersonal skills and said, "Working in a team is an interpersonal skill that is developed in the students by organizing picnics, group assignments, co-curricular activities, peer teaching, etc." Furthermore, a participant-teacher informed,

> Intrapersonal or personal skills are built through social and cultural activities like planting trees, attending cultural events, going on field trips, being a scout, and so on. Their entire journey through the graduation program helps them to be empathetic, reliable, and ethically sound, which switches our students from being a normal person to a motivated leader in their life.

The same teacher mentioned stress management as an adaptation skill and said, "By the course's completion, they are going through different stresses like exams, presentations, arranging a program, etc. that help them be adaptive." Moreover, about developing ethical values, a teacher of Case A said, "Concern and knowledge about plants prepare them to participate in sustainable development and enhance positive ethical consideration." Therefore, interview and FGD findings supported the analyzed data.

Emphasis for Work skills development

Work skills are categorized into seven sub-dimensions in the Self-Assessment Manual (2016) of the QAU of Bangladesh. The first three sub-dimensions are 'time management', 'judgment' and 'problem formulation, solving, and decision-making skills'. Moreover, 'collecting and analyzing appropriate data', 'ability to link theory to practice', 'discipline' and 'sense of responsibility' are sub-dimensions of work skills.

The availability of a sufficient amount of practical activities in nearly all courses of the curriculum was considered HE for the development of a skill referred to as 'capacity to link theory and practice.'

Similarly, the presence of practical activities in the majority of courses for a limited amount was termed ME, and the presence of practical activities in the majority of courses for a very limited amount was considered LE. In addition, NE was considered since the program lacked practical exercises. The curriculum study revealed that, in comparison to other cases, Cases A and C place a greater emphasis on practical work in their course content. On the other hand, Case B had given moderate emphasis, and Case D had given little emphasis, in creating scope to link theory to practice.

Considering the parameters of the sub-dimensions, the results for the emphasis on work skills are presented in table 3.

Table-3: Work skill development emphasis among the cases

Dimensions of quality	Sub-dimensions	Emphasis level among the cases			
		Case A	Case B	Case C	Case D
Work skills	i. Time management	HE	HE	HE	HE
	ii. Judgment	Hidden	Hidden	Hidden	Hidden
	iii. Problem formulation, solving and decision making skills	HE	LE	HE	LE
	iv. Collecting and analyzing appropriate data	HE	ME	ME	LE
	v. Ability to link theory to Practice	HE	ME	HE	LE
	vi. Discipline	Hidden	Hidden	Hidden	Hidden
	vii. Sense of Responsibility	Hidden	Hidden	Hidden	Hidden

Moreover, many hidden components in the entire graduation program responsible for developing skills like judgment, discipline, and a sense of responsibility were revealed from the analysis. These components are nearly impossible to measure and very difficult to compare across the curriculum or entire program.

Table 3 reveals the existence of dissimilarity among the cases in developing work skills within the graduates. The FGD and interview explored the role of the curriculum in developing work skills among the graduates. In response, one of the teachers from Case D mentioned,

> Our curriculum helps the students learn time management from attending classes, finishing presentations in a particular time, and attending exams; they also learn discipline from these activities; they have enough scope to collect and analyze data in different courses; actually, they have scope to learn all work skills.

One of the students in Case C said, "Our curriculum is able to increase our analytical and practical skills, and as a result, we can summarize facts, note down our observations, and establish comparisons from different activities guided by the curriculum." Moreover, a student in Case B pointed out the source of learning about work skills and said, "Our teachers teach us different aspects of being disciplined...they are our role models to learn essential skills like responsibility, finishing any task timely, time management, punctuality, etc." Therefore, the interview and FGD revealed similar findings.

Major findings for skills and values emphasis among the cases

The table 4 represents the dimensions of quality based on survey questions for employers in Self-Assessment manual (2016), overall findings for the emphasis of the dimensions in the curriculum, and comments on overall findings.

Table-4: Comments on overall emphasis for dimensions of quality (skills and values) in curricula of the cases

Dimensions of quality(skills and values)	Overall findings for the dimensions	Overall comments
Communication skills	Scope for developing communication skills were differently emphasized among the curricula of the selected cases.	Botany departments of four selected universities focused differently in consideration of skills and values emphasis in their curricula.
Interpersonal skills	Scope for developing interpersonal skills was differently emphasized among the curricula of the selected cases. Emphasis of hidden aspects for developing interpersonal skills in curricula was difficult to measure and compare.	
Work skills	Scope for developing work skills was differently emphasized among the curricula of the selected cases. Emphasis of hidden aspects for developing work skills in curricula was difficult to measure and compare.	

The data in table 4 reveals that there are significant differences between the cases regarding the skills and values that were intended to be developed in the graduates. In addition, numerous hidden aspects of developing some of the listed skills and values in the SA Manual were not found. Thus, the intended curriculum revealed vast differences in the overall emphasis on skills and values among the selected cases.

Interview and FGD explored the views of the participants regarding the comparative scope for developing skills among the cases. In response, one of the teachers from Case C said, "Actually, there is no authentic scope of comparison or known results... but in general, graduates from universities in the capital are privileged in the job market and considered more skilled by the employers... usually considered smarter than other universities." One teacher from Case A mentioned more specifically, "Difference in curriculum intentions and curriculum producing skill differences among the graduates. As a result, they are judged differently by the society as well as by the employers."

To mitigate the issue, many teachers proposed a similar Botany curriculum at the university level. One of the teachers of Case C in their FGD mentioned, "I do prefer a similar curriculum with a similar learning opportunity for all Botany departments at public universities... as like SSC and HSC Board...not only that funding for teaching and learning should be similar." On the contrary, few teachers were in favor of differences in curriculum, and one of them said, "As same dress does not fit all, similarly, same curriculum won't fit in all universities...location, importance of course, teacher expertise, etc. may demand a diversified curriculum." Therefore, existence of dissimilarity among the cases in developing skills and values within the graduates was identified from the interview and FGD.

Discussion

This section examines the integration of skills and values in the Botany curricula of selected universities, highlighting the need for alignment with job market demands. Despite the recognized importance of aligning curricula with employer needs (Tran & Swierczek, 2009; Dada & Ojetunde, 2020), significant variations exist in how Botany departments approach skills development, raising concerns about graduates' readiness for the competitive job market.

All programs included components for developing oral communication skills, such as discussions and presentations (Darling & Dannels, 2003; Rahman, 2010; Wahyuni, 2018), yet inconsistent teaching methods may result in graduates with varied competencies. While written communication skills are vital for academic and career success (Educational Testing Service, 2013; Roslee & Latif, 2020), their

emphasis varied significantly, indicating potential gaps in writing abilities. Additionally, presentation skills, crucial for workplace effectiveness (Simona, 2015; Adams & Allred, 2015), received inadequate focus.

Teamwork skills, a top employer requirement (Adams, 2014), were emphasized unevenly, and all programs showed minimal focus on leadership skills, which are increasingly sought in the job market (Lester, 2016). None of the curricula explicitly fostered empathy, despite its importance in workplace relationships (Lipponen et al., 2018).

Time management was emphasized across all cases (Jackson, 2009), but disparities in developing judgment skills, vital for informed decision-making (Zhang & Highhouse, 2018), were evident. Variations also impacted students' abilities in problem formulation, solving, and data analysis, critical across industries (Price et al., 2021). Graduates often struggle to connect theoretical knowledge to practical applications, exacerbating skill gaps (Crebert et al., 2004).

The misalignment of curricula with evolving job market demands poses significant challenges. Graduates often possess strong academic foundations but lack essential practical skills, leading to perceptions of them as "half-baked" and unprepared for employment (Dabalen et al., 2001). This academic-industry gap contributes to high unemployment rates among university graduates (Chowdhury et al., 2020), highlighting the urgent need for curricula that prioritize transferable skills like digital literacy and teamwork (World Economic Forum, 2016; Foundations for Young Australians Report, 2016).

In summary, the identified mismatches in skills and values development within the Botany curricula hinder graduates' employability, underscoring the need for curriculum reforms that align more closely with market requirements.

Implications of the Research Findings

The findings of this study highlight significant alignment mismatches within quality assurance processes in Botany curricula at public universities in Bangladesh, impacting the development of employability skills and graduate attributes. Policymakers, including the UGC and BAC, can use these insights to refine quality assurance policies and curriculum guidelines, ensuring they better align with market demands and stakeholder needs. Curriculum developers and educators will benefit from understanding gaps in content design, teaching methods, and assessment practices, which will help improve the overall educational experience and prepare students for the job market. Additionally, this research encourages curriculum harmonization to create uniform standards across institutions, enhancing the quality of education in Botany. Finally, it opens avenues for further research to explore the role of quality assurance mechanisms in shaping graduate profiles, contributing to the ongoing development of higher education in Bangladesh.

Conclusion

In conclusion, the analysis of Botany curricula reveals a pressing need for reform to align educational outcomes with job market demands. While essential skills like oral communication and time management are included, inconsistencies in teaching lead to uneven competencies among graduates. Critical skills such as written communication, teamwork, and leadership are often inadequately emphasized, leaving students ill-prepared for the workforce. This gap between academic training and industry needs contributes to high unemployment rates among recent graduates.

To address these challenges, universities must implement comprehensive curriculum reforms that integrate relevant skills with academic learning. By aligning programs with the evolving job market, institutions can enhance graduates' employability, ensuring they are not only knowledgeable but also

equipped to thrive in a competitive environment. This alignment is crucial for bridging the gap between academia and industry.

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EDUCATIONAL PARADIGM SHIFT: EXAMINING THE RELATIONSHIP BETWEEN SCHOOL CONDITIONS AND STUDENT TRANSITION TO JUNIOR SCHOOL IN GARISSA TOWNSHIP SUB-COUNTY, KENYA

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Abstract

The most demanding phases for students are that of school transition, especially from primary school to junior school. This study was to examine the relationship between school conditions and student transition from primary school to junior school. Quantitative research design was used to investigated the association role of school conditions in student transition. The study targeted 336 teachers in 30 public primary schools within the Garissa Township sub-county. Census sampling technique was used to collect data, questionnaires were administered to collect data from teachers while face and content validity was used to measure the extent to which an instrument was intended to measure as Cronbach Alpha tests were done to analyse items for internal. The mean for school condition was 2.4(SD = 0.54) and the mean for student transition was 2.7(SD = .49). The relationship was positive, moderate in strength and statistically significant (r (244) = 0.172, p = 0.007 < 0.05). The positive monotonic association implies that as the quality of school conditions improves, there is a tendency for an increase in the rate of students transitioning from primary to junior school. The inferential statistics using Spearman's rank correlation was used to test bivariate correlation. The correlation coefficient of 0.172 indicates a positive direction, and its statistical significance (p = 0.007) The correlation is positive, it is important to note that the strength of this relationship is of a moderate magnitude. The findings provide evidence for a discernible and statistically significant association between the quality of school conditions and the process of student transition. The study provides valuable insights into student transitions from primary to junior school, emphasizing the significance of a positive school condition, aligned with Bronfenbrenner's Ecological Systems Theory. Acknowledging the weak correlation and advocating for a holistic approach, the research aligns with Brown et al. (2017), recognizing the multifaceted nature of transitions influenced by socio-economic factors and individual characteristics.

Key words:
School Condition: Is the outlook of the school activities, opportunities exposure, available structures, resources and materials put in place to facilitate transition.
Student Transition: The shift of grade six students from primary to junior school.

Background of the Study

Transitioning from primary school to junior secondary education represents a critical phase in students' academic journey. Notably, this transition phase, is often marked by significant adjustments in learning environments and academic expectations. Transition has garnered considerable attention within scholarly discourse and educational practices. As Mizelle and Irvin (2000) and Hill and Hawk (2004) underscored, the shift to junior school is perceived as one of the most pivotal and potentially challenging periods for young learners. Complicating matters further, there is an identified cohort, particularly sixth-grade students, who face increased difficulties adapting to the larger, more departmentalized, and less nurturing learning environments of junior schools (Niesen & Wise, 2004). Knowledge regarding the transition from primary school to junior school and the potential programs to assist students are yet to be comprehended fully (Smith, 2006). As a result, the transition to junior school offers students new opportunities and challenges (Akos, 2002). Education research on student transition and curriculum programs is crucial, and there is a need to improve the knowledge of parents, educators, and students to consider schools' improvement of performance, school accomplishment, and capacities of sixth-graders at this critical moment in their lives while noting the obscurity of the junior school transition (Akos & Galassi 2004)

The transition process in the Kenyan context is influenced by multiple factors, including educational reforms, socio-economic challenges, and infrastructural limitations. Consequently, the significance of comprehensive understanding and effective support structures for student transitions becomes apparent. Recognizing the crucial need to facilitate a seamless and successful transition, this study critically examines the complexities surrounding the transition process, especially within the context of the Kenyan educational system. In light of the issues and complexities inherent in the transition process, this study seeks to offer a comprehensive analysis and actionable recommendations to foster a more supportive and conducive educational environment for students transitioning from primary to junior secondary education in Kenya. By addressing the gaps in understanding and implementation, this research endeavours to contribute to the overarching goal of ensuring a seamless and effective educational journey for all students.

Statement of the problem

In Garissa Township Sub-County, Kenya, the transition of students from primary to secondary school is significantly influenced by the conditions within the primary schools. Despite various educational reforms and initiatives aimed at improving student transition rates, many students still face challenges that hinder their seamless progression to the next educational level. The recent alteration in the education system's structure, where primary school now concludes at grade six instead of grade eight in the 8-4-4 system, amplifies the challenges faced by primary school leavers in acclimating to the demands of the junior school environment at a younger age. These challenges are often rooted in inadequate school infrastructure, insufficient learning resources, and suboptimal teaching conditions. Consequently, there is a pressing need to investigate how these school conditions impact student transition rates and to identify effective strategies to enhance the educational experience and outcomes for primary school students in this region.

Research Objectives

To examine the relationship between school conditions and student transition from primary school to junior school in Garissa township subcounty.

Hypotheses of the Study

H_{O1}: There is no significant relationship between school conditions and student transition from primary school to junior school in Garissa township subcounty.

Theoretical Framework

Ecological System Theory

The Ecological System Theory developed by Bronfenbrenner (1977) describes the progressive adjustments individual make throughout their lives in response to the surroundings they live in. The theory focuses on the context and quality of a person's existence as seen through several developmental stages that take place inside intricately linked systems. Furthermore, he pointed out that people's environment and ecological realities have an impact their development, including conduct. Additionally, people are impacted by systems like those in their families, schools, and workplaces directly, as well as indirectly via laws, resources, and other people's expectations. Using layered systems as a conceptual framework, Bronfenbrenner (1977) described his theory in terms of microsystem, mesosystem, exosystem, and macrosystems. These four layers of systems, according to his theory, dictate human growth. The most significant microsystem for emotional growth is school environment and during transition the emotional spectrum broadens to take into account the effects of the changing surroundings.

The interaction between the main environments that surround the developing person at a specific time in their life is (Bronfenbrenner, 1977). During mesosystem individual growth is influenced by each mesosystem in which they are exposed to novel activities and social systems. The connections that are formed between persons and surroundings in her microsystems are not just those formed by the developing individual. Every external network that influences the microsystems, such as social and educational networks, is a part of these systems. It influences a developing person's experiences even when she doesn't engage with the exosystem directly. The individual's direct participation in these systems is influenced by the exosystem, which affects their surroundings. When considering this in relation to school condition and how teacher competencies to ensure proper implementation of curriculum and easy transition.

Schlossberg's Transition Theory

Schlossberg (1995) developed the Schlossberg's Transition theory regarded as a development theory, that is equally applicable to the study of students' development. Schlossberg created three categories of factors that influence an individual's ability to adjust to change while dealing with their environment adaption. These three sets of variables consist of the student perspective on pre- transition, transition and post transition. In this study, the theory explained that every teacher can approach change with the tools at their disposal for change, while transition process was influenced by number of variables, such as timing, control, prior experience, duration, and concurrent issues. The theory also revealed that social support component from teachers leads to acquisition of affection and affirmation during transition.

Comprehensive School Reforms Theory

The comprehensive school reform theory, as proposed by Bryk et al. (1993) focuses on building a learning environment and fostering student transition in schools. The focus is on top-down initiatives to enhance education by implementing new school policy such change in curriculum, rules and regulation, and more fundamental requirements. It recommends that instructional quality be raised, parents be involved and schools to create a welcoming and safe learning environment for their students. However, classroom curricula, student grouping strategies, teacher attitudes and beliefs, and aspects of school administration must all be changed as part of school reform. These changes must also be made to particular school policies and organizational structures. These modifications necessitate that teachers carefully consider the changes and integrate them into their conceptions of education and school culture. As a result, teacher confidence in their own abilities, competence and the degree of assistance is beneficial and likely to boost the transition model (Bryk et al., 1993).

Transition

Campbell and Jacobson (2008) posit that transition is an inevitable component of every stage of life and requires people to be aware of their surroundings and work toward maintaining their safety, personalities and connections. Notably, school transition identifies three major transitional points in the public education system: when students move from primary school to junior school, from junior school to senior secondary school, and from high school to college/university. While students experience other 'transitions' during their educational journey such as advancing from one grade level to the next the three 'major' transition points are a particular focus of teachers and education policy makers because transitioning students often experience significant academic, social, emotional, physical, or developmental changes that may adversely affect their educational performance (Gniewosz & Gniewosz, 2019).

Additionally, it is established that one of the most demanding phases for students is that of school transition, especially the one from primary school to junior school (Gazelle &Druhen, 2009; Shell et al., 2014). Since junior school involves adjusting to a new school environment with unfamiliar teachers, friends, varied school programs, and high academic expectations. It is more likely for students to become agitated, nervous, irritable and uncomfortable during the transition process while some students fail to cope with the new environment (Akos, 2006). Therefore, students must adapt to harder tasks, achieve more different goals and have great pressure for them to cope with the junior school environment (Scalera &Alivernini, 2010).

Several studies have described the student transition to junior school as being the most critical when compared to other school transitions Scalera and Alivernini (2010), Ellerbrock and Kiefer (2013) especially because of its complexities and uncertainties. A study conducted in Italy, revealed that, 20.3% of new enrolments in the first year of junior school declined (ISTAT, 2011). This highlights the critical state of student transition to junior school. Numerous studies also reveal that sixth-grade students typically fall into the concrete operational and formal operational developmental stages. During these stages students become less egocentric and have a greater awareness of the world around them and the events taking place therein and also acquire the ability to think in an abstract way (Inhelder & Piaget, 1958; McLeod, 2010). Given the developmental stages of students during this period and their inability to think concretely through tasks and challenges, it can be argued that sixth-grade students may not be cognitively ready for such a transition.

Several studies have also highlighted that there are several issues that makes it difficult for students to adapt easily to junior school which include larger and more chaotic classrooms, school organization marked by a change in curriculum, and a heavier workload requiring increased student cognitive effort (Akos & Galassi, 2004; Scalera & Alivernini, 2010; Eccles & Roeser, 2011; Waters et al., 2012). As a result, transition process causes a series of changes, making it necessary for students to reorganize their social lives to cope with the new adaptation, environment and development tasks. Conversely, many studies have documented that a warm school condition, fostered by the social support of teachers and positive school culture lowers problem associated with student transition. (Wang & Eccles, 2012). While transition to a new class may also provide students with positive opportunities to establish more satisfying and gratifying relationships with peers (Li & Lerner, 2011).

Berman (1965) suggests that the transition to middle school is "poorly timed." Since "in the midst of deciding who they are, they should not waste any energy deciding where they are." He believes that between the ages of 11 and 13, adolescents need a "familiar and secure background in which to operate" (Berman, 1965). The findings are in agreement with Graham (2013) posit that "the transition to middle school comes at a time when children are starting to form personal identities, and the need to fit how they will develop emotionally. Therefore, an effort to fit in, students often succumb to pressure. To understand the complexity of this issue surrounding junior school, informed decisions should be made to support sixth graders as they transition to junior school while a clear understanding of the transition as it relates to the inner workings of the school organization (teacher competencies) must be realized.

School Condition and Transition

Wagner et al. (2006) connote that the school condition is the outlook of the school, and the available structures, resources and materials to facilitate learning. This helps teachers to predict transition patterns in education. However, transition process results to inadequate students' preparation for the program and derailed performance due lack of exposure to the upcoming task. Therefore, positive school condition is determinant to student transition to junior school. Drago-Severson (2009) connotes that

proper school conditions such as enough material, information accessibility and necessary data, guarantee for an effective transition. The findings are in agreement with Wagner et al. (2006) that enough resources increase student achievement and prior accomplishments to defines a positive student transition.

Elmore (1996) suggested that different and varied learning areas promote negative transition. Therefore, to preserve correct learning and a seamless transition proper school condition should be put in place to ensure teachers are expected to teach and engage students to the best of their ability. The findings are also in agreement with Kuczynski Brown (2012) who asserts that there is a growing need for the roles and actions of teachers in the school conditioning to be explicitly defined. In addition, reallocating personnel and resources to support the development of transition systems and the indisputable change required to address current transitional issues to improve an educational system. Stewart (2011) identifies financial incentive during the preparatory period, professional development for career progression and training of all instructors as school conditions during transition modelling.

A study conducted by Gruenert (2008) revealed that school conditions serve as a lever for students to transition. The study used the cohort of students in the entire region, and their sample size was 16,258. This population included a wide range of factors of transition. While considering five common areas of school conditions: order, safety, social relationships, school facilities, and school connectivity (Zullig, Koopman, Patton, & Ubbes, 2010). The study found a direct correlation between school condition and student transition and the quality of academic achievements. Therefore, it was imperative that junior secondary have a positive school condition to determine student transition (Beaty & O'Ferrall, 2015; Kwong & Davis 2015).

According to Gage, Scott, Hirn, and MacSuga-Gage (2018) revealed that negative school condition affects how students feel about themselves and the school. This however, in turn affects the student transition process and their success in the classroom. Additionally, there was need for teachers to foster meaningful relationships with their students, foster trust, and raise academic achievement. To provide students the satisfying transition experiences (Beaty, O'Ferrall, Green, and Hanna 2015) which results to productivity both within and outside the classroom (Lashley & Stickle, 2016).

Methodology

Research Design

Quantitative research design, utilizing a correlational approach was used to investigate the association between specific predictor variables (Competencies) and   student transition variable. Creswell (2014) posits that correlational design determines the association, measurement, and evaluation of variables on statistical connection without controlling the predictor variable. These is in agreement with Wagner et al. (2006) that correlational research design normally focuses on the association of variables. In this case, the research focused on predicting the transition of grade six pupils to grade seven in junior school.

Target Population

Target population refers to individuals who make up a community or a group with common characteristics, whether factual or actual (Creswell, 2019). The study targeted 336 teachers in public primary schools within the Garissa Township sub-county. A total of 30 public primary schools (2 special schools and 28 regular schools) formed the target population of the study. Total population sampling gave each individual in the population an equal chance to participate in the study. Table 1 shows the distribution of teachers.

Table 1: Sample Size of Teachers

Category	Population	Sample size
Teachers	336	336
Schools	30	30
Total	**336**	**336**

Source (Ministry of Education, 2023)

Sampling Procedure

Census sampling also known as total population sampling was used to collect data from every single unit in the population. Yin (2014) posits that census sampling is a type of purposive sampling technique where the entire population of the study is examined since they have a particular set of characteristics. Yin (2014) connotes that selecting the entire population for the study yields deep insights into the phenomenon, reducing the risk of missing latent information from members not included. Census sampling involved identifying school characteristic to define the population. Additionally, census eliminated sampling error and provided a precise understanding of the entire population. As a result, all 336 teachers instructing 30 public primary schools in Garissa sub-county were sampled.

Instrumentation

This study employed questionnaires to collect data from respondents. Since they save time and heighten the independence and accuracy of responses (Saunders et al., 2009). The questionnaire was administered to teachers in public primary. The questionnaire items were adapted from (La sabra, 2015).

Analysis, Findings and Interpretation

Data analysis identifies patterns in inference-making by methodically and objectively identifying particular pointers to occurrence trends and the researcher should be able to construct a framework that communicates a sense of what the data reveals (Creswell, 2014). The relationship between the predictor variables and the outcome variable was determined through descriptive statistics and inferential statistics.

Checking Parametric Assumptions

To model the relationship between the school condition and the student transition, linear regression was hypothesized to fit the study. The study made an assumption that quantitative variables measured on four-point Likert scale with the anchors "strongly disagree, disagree, agree and strongly agree" as response category indicates that predictors rating constitutes of a continuous and normally distributed variable subsequently apply linear regression models. Liddel and Kruschke (2017) connotes that those studies with response category of 3-7 responses are typically analysed with linear regression model because the data obtained are perceived to be normally distributed and 'termed' to be metric as it involves T- test and ANOVA. As a result, the data was transformed and parametric tests done.

Scatter Plots Tests

Scatter Plots tests the Correlation and the measure of relationship between two monotonic variables. Therefore, the change in the magnitude of 1 variable is associated with a change in the magnitude of another variable, either in the same or in the opposite direction. Additionally, higher values of 1 variable tend to be associated with either higher (positive correlation) or lower (negative correlation) values of the other variable. Figure 4.1 shows scatterplots of the correlation between school condition and transition.
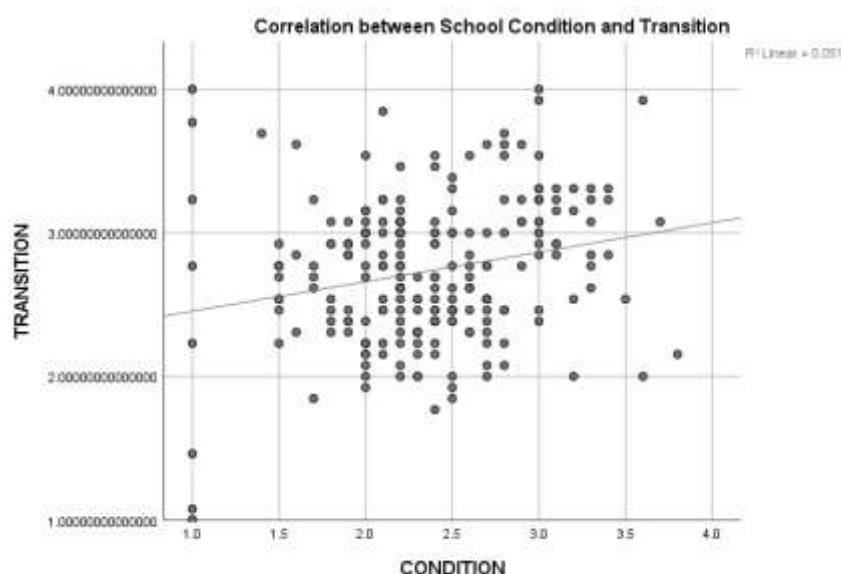
Figure 1: *Correlation Between School Condition and Transition*

The results shows that there is a 'weak' relationship between school condition and transition since the data points in a scatter plot seem to be scattered randomly in the figure above. Therefore, the assumption of monotonic relationship is not violated since increase in school condition increases transition rate.

Relationship Between School Condition and Student Transition

To test for the hypothesis: Spearman's rank correlation was run to examine if school conditions was significantly associated to student transition from primary school to junior school. The scale scores were used to measure the degree to which a respondent agrees or disagrees with a particular statement or question. Table 2 shows the correlation between school condition and transition.

Table 2: Correlation between School Condition and Student Transition

			CONDITION	TRANSITION
Spearman's rho	CONDITION	Correlation Coefficient	1.000	.172**
		Sig. (2-tailed)	.	.007
		N	246	246
	TRANSITION	Correlation Coefficient	.172**	1.000
		Sig. (2-tailed)	.007	.
		N	246	246

**. Correlation is significant at the 0.05 level (2-tailed).

The higher the score, the stronger the agreement with the statement or question. The mean for school culture was 2.4(SD = 0.54) and the mean for student transition was 2.7(SD = .49). The relationship was positive, moderate in strength and statistically significant (r (244) = 0.172, $p = 0.007 < 0.05$).

In other words, the positive monotonic association implies that as the quality of school conditions improves, there is a tendency for an increase in the rate of students transitioning from primary to junior school. The correlation coefficient of 0.172 indicates a positive direction, and its statistical significance

($p = 0.007$) supports the assertion that this observed correlation is unlikely to have occurred by random chance. While the correlation is positive, it is important to note that the strength of this relationship is of a moderate magnitude. The findings provide evidence for a discernible and statistically significant association between the quality of school conditions and the process of student transition in the examined sample. The significance of this correlation is supported by the large sample size of 246, which provides enough power to detect even a small effect.

Discussion

The results reveal a positive and statistically significant association between school conditions and the transition of students from primary school to junior school. The positive direction of the correlation coefficient ($r = 0.172$) suggests that as the quality of school conditions improves, there is a tendency for an increase in the rate of student transition. However, it is crucial to interpret the magnitude and implications of this correlation in the context of existing literature and relevant theoretical frameworks. The findings of this study align with previous research emphasizing the likely role of school conditions on student transition. A study by Johnson and Smith (2016) found that positive school environments, characterized by adequate facilities and a supportive culture, were associated with higher rates of student success in transitioning from one educational level to another. Their work supports the idea that favourable school conditions can create an environment conducive to positive educational transitions.

Moreover, the Social Ecology Theory, proposed by Bronfenbrenner (1979), provides a theoretical lens to understand these findings. The theory posits that individuals are influenced by various environmental systems, including the immediate settings like schools. The positive correlation observed in this study can be interpreted through the lens of the Social Ecology Theory, suggesting that the quality of school conditions contributes to a supportive environment that facilitates smoother transitions for students.

However, it is important to note that some research might present contrasting views. For instance, a study by Anderson and Brown (2018) suggested that while school conditions can play a role, other factors such as family support and individual characteristics of students may also significantly influence the transition process. This implies that the relationship between school conditions and student transitions is complex and multifaceted.

The Positive Youth Development (PYD) framework, proposed by Lerner et al. (2005), may offer insights into the observed correlation. According to this framework, positive environments, including those within schools, contribute to the developmental assets of young individuals. In the context of student transition, the quality of school conditions may be seen as one of the contributing factors to the positive development of students as they move from primary to junior school.

In conclusion, the positive and statistically significant association between school conditions and student transition supports the notion that the quality of the educational environment plays a role in shaping the educational journey of students. While the correlation is of moderate magnitude, its statistical significance and the support from existing literature and theoretical frameworks provide a foundation for understanding the importance of school conditions in the transition process.

Recommendation

1. Promote positive school environments, including adequate facilities and a supportive culture to foster smooth transition to junior school.
2. Implement a holistic approach to transition support, considering socio-economic backgrounds, family dynamics, and individual student characteristics, as emphasized by Brown et al. (2017) and Gonzalez and Williams (2019).

Suggestion for Further Studies

Further Studies on student transition additional variables, such as family support, peer relationships, and individual student characteristics, to gain a comprehensive understanding of the transition experience

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NEW TRENDS IN EDUCATIONAL RESEARCH: CONTEXT TO NEP 2020

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Abstract

This paper explores the meaning of education research. Educational research refers to systematic inquiry conducted to advance knowledge and understanding in the field of education. Furthermore, Key aspects of educational research which includes area of interest, research methodologies, purpose and objectives application and impact, educational research is of paramount importance for several reasons, informing policy and decision-making, addressing educational inequities: promoting innovation and creativity enhancing student outcomes, empowering educators and practitioners, contributing to global knowledge base, fostering lifelong learning, NEP 2020 and educational research, interdisciplinary approach, focus on early childhood education, holistic and multidisciplinary education, teacher training and professional development, promotion of indigenous knowledge systems, technology integration, assessment reforms, promotion of research culture, issues & challenges implementation of NEP2020

Key Word: *Educational Technology, Digital Education, Issues, Challenges, NEP 2020*

Educational research refers to systematic inquiry conducted to advance knowledge and understanding in the field of education. It encompasses a wide range of topics, methodologies, and objectives aimed at improving educational practices, policies, and outcomes. Educational research can be conducted by scholars, educators, policymakers, and other stakeholders interested in addressing pressing issues, exploring innovative approaches, and contributing to the advancement of the education system.

Key aspects of educational research include:

Area of Interest: Educational research encompasses diverse topics related to teaching, learning, curriculum development, assessment, educational technology, school organization, policy analysis, and more. Researchers may investigate specific educational interventions, pedagogical approaches, student outcomes, or broader systemic issues affecting education.

Research Methodologies: Educational research employs various research methodologies and approaches, including qualitative, quantitative, and mixed methods. Qualitative research methods, such as interviews, observations, and case studies, help researchers explore complex phenomena and understand the perspectives of stakeholders. Quantitative research methods, such as surveys, experiments, and statistical analysis, enable researchers to collect and analyze numerical data to identify patterns, relationships, and trends. Mixed methods research combines qualitative and quantitative techniques to gain a comprehensive understanding of educational phenomena.

Purpose and Objectives: Educational research serves multiple purposes, including descriptive, exploratory, explanatory, and evaluative. Descriptive research aims to describe educational phenomena and establish baseline information. Exploratory research seeks to generate hypotheses and uncover new insights. Explanatory research investigates causal relationships and underlying mechanisms. Evaluative research assesses the effectiveness, impact, or outcomes of educational interventions, programs, or policies.

Application and Impact: The findings of educational research are applied to inform educational practice, policy development, and decision-making. Educational research contributes to evidence-based decision-making by providing empirical data, theoretical frameworks, and practical recommendations

to address educational challenges, improve teaching and learning practices, promote equity and inclusivity, and enhance student outcomes.

Ethical Considerations:

Ethical principles and guidelines govern the conduct of educational research, ensuring the protection of participants' rights, confidentiality, informed consent, and integrity in research practices. Researchers adhere to ethical standards to maintain the trustworthiness, credibility, and validity of their research findings.

Overall, educational research plays a vital role in advancing knowledge, informing practice, and driving positive change in education. By engaging in systematic inquiry, researchers contribute to the continuous improvement and innovation of educational systems, policies, and practices to better meet the needs of learners and society.

Educational research is of paramount importance for several reasons: Improving Teaching and Learning Practices: Educational research helps identify effective teaching and learning strategies, instructional methods, and curriculum designs. By studying different approaches and their outcomes, educators can make informed decisions to enhance the quality of education.

Informing Policy and Decision-Making: Policymakers rely on educational research to formulate evidence-based policies and initiatives. Research findings provide valuable insights into the needs, challenges, and priorities of the education system, guiding the allocation of resources and the development of strategic plans.

Addressing Educational Inequities: Educational research sheds light on disparities in educational access, opportunity, and achievement. By examining the factors contributing to inequities, researchers can propose targeted interventions and policies to promote equity and inclusivity in education.

Promoting Innovation and Creativity: Research in education fosters innovation by exploring new ideas, methods, and technologies. Through experimentation and iteration, researchers develop novel approaches to teaching, learning, and assessment, driving continuous improvement and adaptation in educational practices.

Enhancing Student Outcomes: Educational research helps identify factors influencing student success and well-being. By studying student motivation, engagement, and socio-emotional development, researchers can develop interventions to support academic achievement and holistic growth.

Empowering Educators and Practitioners: Educational research equips educators and practitioners with knowledge and tools to address diverse learning needs and challenges. Research-based professional development programs enable teachers to refine their instructional practices, tailor interventions to individual students, and collaborate effectively with colleagues.

Contributing to Global Knowledge Base: Educational research contributes to the global knowledge base by generating new theories, frameworks, and empirical findings. Cross-cultural studies and international collaborations expand our understanding of educational phenomena, enriching practice and scholarship worldwide.

Fostering Lifelong Learning: Research in education promotes a culture of lifelong learning among educators, students, and stakeholders. By encouraging inquiry, reflection, and critical thinking, research cultivates a community of practitioners committed to continuous professional growth and improvement.

Overall, educational research plays a crucial role in shaping the present and future of education by informing policy, enhancing practice, promoting equity, and advancing knowledge and innovation. It is an essential driver of positive change.

NEP 2020 and Educational Research: The National Education Policy (NEP) 2020, introduced by the Government of India, aims to revamp the education system to meet the challenges of the 21st century. From the perspective of educational research, NEP 2020 has several implications and opportunities:

Interdisciplinary Approach: NEP 2020 emphasizes the integration of different disciplines and the promotion of multidisciplinary research. This encourages educational researchers to explore connections between various fields, fostering innovation and creativity.

Focus on Early Childhood Education: The policy emphasizes the importance of early childhood care and education (ECCE). Educational researchers can investigate effective strategies for ECCE implementation, assess its impact on children's development, and identify best practices for quality enhancement.

Holistic and Multidisciplinary Education: NEP 2020 advocates for a holistic and multidisciplinary approach to education, promoting critical thinking, creativity, and problem-solving skills. Educational researchers can study the effectiveness of this approach in enhancing student learning outcomes and overall development.

Teacher Training and Professional Development: The policy highlights the need for continuous professional development of teachers. Educational researchers can explore innovative methods for teacher training, assess the impact of professional development programs on teaching practices and student achievement, and identify strategies to support teacher well-being and retention.

Promotion of Indigenous Knowledge Systems: NEP 2020 recognizes the importance of indigenous knowledge systems and encourages their integration into the curriculum. Educational researchers can explore indigenous pedagogies, evaluate their effectiveness in promoting learning outcomes, and document traditional knowledge practices for preservation and dissemination.

Technology Integration: The policy emphasizes the integration of technology in education. Educational researchers can investigate the impact of technology on teaching and learning processes, explore effective uses of educational technology tools, and identify barriers to technology adoption in different educational contexts.

Assessment Reforms: NEP 2020 advocates for a shift from rote memorization to competency-based assessment. Educational researchers can study alternative assessment methods, such as project-based assessments and portfolios, and evaluate their validity, reliability, and fairness in measuring student learning outcomes.

Promotion of Research Culture: The policy aims to promote a culture of research and innovation in educational institutions. Educational researchers can contribute to this goal by conducting high-quality research, publishing their findings in peer-reviewed journals, and collaborating with other stakeholders to address pressing educational challenges.

Overall, NEP 2020 provides a framework for educational researchers to explore new avenues of inquiry, innovate teaching and learning practices, and contribute to the improvement of the education system in India.

Issues and Challenges Implementation of NEP 2020

Even though the National Education Policy 2020 had suggested to create conducive Educational Technology atmosphere in education system but we are still faces teething problem for the implementation of new technologies in education. Some of them from Higher and School Education are:

1. Not enough or limited access to computer hardware & computer software in education institutes.

2. Lack of time in school schedule for projects involving use of technologies.

3. Lack of adequate technical support for education institutes.

4. Not enough teacher training opportunities are there.

5. Lack of knowledge about ways to integrate technologies to enhance curriculum.

6. Education technologies integration is not a priority.

7. Students and Teachers do not have access to the necessary technology at home.

8. School Education

9. Does we have sufficient technology (hardware and software)

10. Does our education system is ready to adapt whatever changes being taking place with concern to educational technology.

11. Does our education systems Human Resource are well acquainted with new technology?

12. Does our school curriculum have such content related to educational technology & digital technology, if not how much duration is required to manifest it?

13. Have our education enough aware about educational & digital technology.

14. What is the role of Government for the development of Educational Technology & Digital Technology?

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Study Webs of Active-learning for Young Aspiring Minds (SWAYAM) is a web-portal launched by the government of India that hosts free classroom courses for 9th standard and above. Details here: https://swayam.gov.in/about

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EDUCATION IN 2050: A VISION FOR THE FUTURE

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Abstract

By 2050, education is expected to undergo a dramatic transformation, driven by technological advancements, data analytics, and a deeper understanding of how humans learn. This vision of the future sees the integration of artificial intelligence (AI), virtual and augmented reality (VR/AR), and neuroscience into daily learning processes, enabling highly personalized and adaptive education experiences. AI tutors and data-driven insights will allow educators to customize lessons to suit each student's learning style, pace, and interests, maximizing student engagement and outcomes.

In addition, schools of the future will likely be less confined to physical spaces. Virtual classrooms, powered by immersive technologies, will enable global, borderless learning where students from different parts of the world can collaborate in real time. Traditional curricula will give way to interdisciplinary and project-based learning, equipping students with critical thinking, problem-solving, and creativity skills needed to thrive in an ever-evolving, technology-driven world.

Education in 2050 will also place greater emphasis on inclusivity and equity. Global online platforms and digital resources will help bridge educational gaps, providing quality learning opportunities to underserved communities. In this vision of the future, education evolves into a lifelong, borderless journey, tailored to each individual and supported by cutting-edge technology, ensuring that no one is left behind.

Keywords: Artificial Intelligence, Education, Teaching, ChatGPT, Technology

Introduction

The world of education in 2050 will look vastly different from today, shaped by rapid technological advancement, evolving societal needs, and an increasingly interconnected global community. This transformation will redefine not just how we learn, but also who we are as a society. In envisioning the future of education, several key themes stand out: personalized learning, a reimagined role for educators, and a holistic approach that blends technology with social-emotional learning.

The following are the glimpse at how education will possibly look like in 2050

1. Widely Spread Homeschooling Approach

Due to the need to give education more individual approach, the priority will be given to homeschooling. Students will be able to study and learn what they want, when they want, and for as long as they want. It will also give more physical, emotional and religious freedom as well as opportunity to spend more time with family.

Significantly less money is spent on homeschooling than on an average public school.

A school environment is more favorable at home. Peer pressure, competition, boredom, and bullies are no longer the part of an education process.

2. Personalized Learning

Students will cover the material with study tools adapted to capabilities of a student. As a result, students will be challenged with harder tasks and questions when a certain level is achieved. Those who experience difficulties with a subject will get the chance to practice more until they reach the required level.

- Individual, self-paced curriculum enabling comfortable and effective learning.
- Learning environment that adheres to student's needs.
- Technologies that enrich learning potential and boost creativity.

- Frequent skills check that help to be in a constant study progress.

3. More E-learning Platforms

With the help of technology, the way knowledge is passed on will undergo significant shift towards online platforms. Learning will incorporate virtual reality and multiple perspectives. New platforms will give students an opportunity to learn how to negotiate issues and exchange ideas online. It is the right way to online education.

- More E-learning platforms are affordable for people with limited budget.
- Distant learning enables to mix study, work and family duties, and maintain the balance between them.
- Physical presence is not required, so learning becomes affordable in any corner of the world.

4. No Physical Campuses

There will probably be no campuses as we know them today. Learning won't be limited to a physical school. Traveling classrooms and the real-world environment will be a new campus. However, city libraries and city laboratories will remain to help students complete their projects.

- Students are no longer dependent upon a certain place and are able to study wherever they are.
- Students become closer to nature as they have a chance to spend more time out of the classroom.
- Unlimited study space makes students more open to the world around facing its real challenges.

5. Project-Based Learning & Rise of Edtech in the Classroom

Games that help kids code, toys which teach robotics, and various apps for teachers to efficiently deliver information to students will become common. Technologies will facilitate teaching and learning process. Learning will come to be more creative and practical. Students will be assessed on critical-thinking and problem-solving skills. Taking tests will be replaced by students' performance through creative projects.

- Project-based learning combines creativity and collaboration to problem solve difficult questions and tasks.
- PBL provides real world connection, structured collaboration, core to learning and multifaceted assessment.
- Edtech in schools improves digital literacy enabling students to master technical skills such as coding.
- Learning through reading or lecture videos and doing project or discussing what was learned in the classroom is possible only through Edtech.
- Ed tech makes grading much easier. There are tons of EdTech tools that enables automated grade calculation and measuring student progress.

6. Teacher as a Guide

The role of a teacher will be not only to pass the knowledge but also to identify student's strengths, interests and values. Their primary job will be to guide students in the areas where they need guidance as innovators.

- Teachers perform as facilitators to support students in developing their way of thinking and learning.
- Teachers develop learning plans for students to obtain all necessary set of skills to be adaptable to whatever career paradigm that will emerge.

7. Social and Emotional Skills as a Priority

To thrive in the workplace of the future, skills such as creativity, collaboration, communication and problem-solving will become must-have competencies for future specialists as the market will see a huge increase in jobs requiring a mentioned set of skills.

- In the classroom, students are taught SEL skills through discussions, cooperative group work, problem-solving and group reflection.
- Parents also encourage children to develop SEL skills by remaining involved in their child's education and providing a safe environment that will foster their further development.
- Extracurricular activities such as sports and music perform as accelerators for quicker SEL skills attainment.

8. Personalized Learning Powered by AI and Data

By 2050, education will embrace artificial intelligence (AI) and data analytics to offer a more personalized learning experience. AI will assess each student's strengths, weaknesses, and learning pace, creating tailored lesson plans that adapt as they progress. This individualized approach allows students to thrive at their own pace, closing gaps in understanding and fostering a love for learning. Instead of a one-size-fits-all curriculum, AI-driven systems will help each student unlock their unique potential.

- Learning management platforms powered by AI will likely have real-time feedback mechanisms, nudging students towards areas needing improvement and providing resources that suit their interests and skills. Students will learn through a mix of interactive content, immersive simulations, and gamified environments, making learning engaging and highly relevant.

9. Global Classrooms and Cultural Exchange

The classrooms of 2050 will be borderless. Through virtual reality (VR) and augmented reality (AR), students will experience immersive exchanges, collaborating on projects with peers worldwide. This exposure to diverse cultures and perspectives will foster global understanding, empathy, and teamwork—skills essential in a globally connected world. Foreign language acquisition and cultural studies will be more experiential, as students "visit" cities across the globe and interact with native speakers from the comfort of their classrooms.

- Globalized learning environments will also mean greater inclusivity, allowing students from remote or underserved areas to access quality education. International collaboration will no longer be limited to exchange programs; rather, every classroom will offer a window to the world.

10. Teachers as Facilitators and Coaches

In the education landscape of 2050, the role of teachers will shift from content deliverers to facilitators, mentors, and life coaches. While technology will handle routine instruction and assessments, teachers will focus on guiding students in critical thinking, problem-solving, and social-emotional skills. Teachers will support students in understanding how to apply knowledge in real-world contexts, helping them develop soft skills such as empathy, adaptability, and resilience.

- This transformation will also involve a redefinition of teacher training. Educators will be trained in the latest technology, psychology, and global competencies, enabling them to create meaningful connections with students. The teacher of 2050 will be less of a lecturer and more of a mentor who motivates, inspires, and instills values.

11. Learning Beyond Traditional Subjects

As the demand for more adaptable, cross-disciplinary thinkers grows, education in 2050 will move beyond traditional subjects. Core skills will include problem-solving, ethical reasoning, environmental literacy, and global citizenship. Subjects like artificial intelligence, biotechnology, digital literacy, and

sustainability will take center stage. Furthermore, lifelong learning will become a norm as rapid technological changes require continuous upskilling.

- Education will also extend beyond academic skills, with an emphasis on social and emotional learning (SEL). Empathy, mental health, and community engagement will be integral parts of the curriculum, producing well-rounded, emotionally intelligent individuals capable of thriving in collaborative, multicultural environments.

12. Sustainability and Community-Centered Education

By 2050, the importance of sustainable living will be ingrained in education systems. Schools will serve as models of environmental responsibility, incorporating sustainable practices and teaching students to be stewards of the planet. Local communities and schools will collaborate to address environmental challenges, turning students into agents of positive change. Green campuses, renewable energy sources, and curricula that emphasize eco-literacy will be commonplace.

- Education will also focus on community involvement and local problem-solving. Students will take part in service-learning projects that address local issues, providing them with hands-on experience and instilling a sense of responsibility towards their communities.

13. Health and Well-being as Educational Priorities

Education in 2050 will prioritize students' physical, mental, and emotional health. Schools will offer holistic health programs that encourage physical activity, proper nutrition, mental health support, and emotional resilience. These elements will be woven into the daily routine, supported by technology that helps track and manage student well-being. Programs addressing mental health will reduce stigma, teaching students to navigate stress, build confidence, and seek help when needed.

- Well-being will be seen as an essential component of learning, recognizing that students perform best when they are healthy and supported. Education will evolve to embrace the philosophy that academic success and personal well-being are deeply intertwined.

A better world through education

"We need an open global dialogue, bringing together the brightest minds to inspire progress and accelerate change and action within education to help shape a brighter, better future," says Ma (as cited in Wong, 2021), secretary-general of the Yidan Prize Foundation. Ultimately, the world needs answers to climate change, inequality, and other social challenges that will only be met by a generation educated in schools that are more innovative, more student-centered, and more determined to help every child to learn.

Conclusion

Education in 2050 promises a transformative experience shaped by technology, personalization, and a deep understanding of human needs. This future envisions schools not just as places for academic learning, but as holistic institutions that foster emotional, social, and intellectual growth. By preparing students with both technical skills and human-centered abilities, education in 2050 will pave the way for a generation equipped to tackle global challenges and thrive in an ever-evolving world.

The relationship between ChatGPT and education can be deepened by conducting studies on the advantages or disadvantages of ChatGPT in the fields of expertise. In addition, studies can be conducted on the potential risks of ChatGPT in order to contribute to the literature. In the end, no technological development is neither completely positive nor completely negative. Therefore, it is important to consider ChatGPT in all aspects in order to make sense of the relationship between ChatGPT and educational activities in a holistic manner.

There are numerous known (demographic, funding, costs) and unknown (technological, competitive, black swans) challenges that higher education will face between now and 2050. Whatever the future looks like, we hope it will be led by a commitment to understanding and adapting our institutional structures to how our students learn in an equitable and inclusive environment that enables all our students to succeed. In these difficult days of 2020, the ability to look forward to a better future for our students and for higher education is more important than ever.

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EDUCATION, TECHNOLOGY AND PEACE – PROMOTING WORLD PEACE

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Abstract

Technology in itself has a very broad meaning. From wheel to the latest launched satellite, all comes under the development of technology for the peace of world. It has tremendous power to revolutionize the whole world and making it peaceful to live in. It has made our lives comfortable and easier in one or the other way by integrating us nationally and internationally. In today's scenario, our lives have become so complicated that we have to take its help in making our lives harmonious. It has wide application in developing peace worldwide. So, it is the duty of every single citizen of the nation to use it in the best possible ways for the betterment of human race. Though, we cannot deny the multiple harms of using technology but still we can try to minimise its affects and can use in the best possible ways for promoting peace. We have discussed 'Role of Technology in promoting World peace'. Instead of using Technology for violence, it should be used to promote peace. In this paper it has been discussed that what are the different areas where we can use technology for developing peace? What are the different ways that should be opted for promoting peace through it. ICT acts as an important tool to achieve the aim of developing harmony among individuals as well as with the society.. ICT can be used for identifying various problems related to environment through early warning systems, promoting their peaceful solution, supporting humanitarian actions, including protection of beings and assisting post conflict peace building and reconstruction. This paper is a comprehensive study of the crucial role of technology in developing and promoting peace.

Keywords: Reality, positivity, protection of human rights, disaster management, remedies

INTRODUCTION

Every creature in this world needs peace, i.e., every creature wants to establish harmony with oneself as well as with the environment. It is the adjustment with the internal as well as external. As it is the need of an individual and individual constitutes the society, so, it is also the need of a society. It is needed for a better way of living. There are so many means of developing this peace such as through education, teaching, sports, campaigns, media, theatre and other performing arts. Except all these, we cannot deny the role of technology in promoting peace.

TECHNOLOGY: Technology is derived from two Greek words "techne" and "logia". Techne means art, skill, cunning of hand and logia means collection or set. Thus, technology is the collection of techniques, skills, methods and processes used in the production of goods or services. From simple wheel to the latest launched satellite all comes under technology. ICT, i.e., Information and communication technology as a tool helps people to communication on the world scale. Hence, it supports us in achieving the goal of promoting peace .Technology has tremendous scope of promoting peace from climate change to public health, from food security to sanitation, from disarmament to disaster management etc.

NEED OF TECHNOLOGY IN DEVELOPING PEACE

• Technology is a powerful tool of communication.

• Technology brings together all the people residing in different parts of the world through one or the other medium.

• Digital media tools provide new and creative ways to develop national and international integration. It offers tools for collaborative media creation and dissemination through social media, blogs, wikis, citizen journalism and participatory maps.

• Networking platforms like peer network and discussion forums provide new opportunities to foster positive contact between conflict groups.

• It provides tools which can be used in different fields like social, political, cultural, psychological, defence and economics etc. to resolve the issues and promote peace.

AREA WHERE TECHNOLOGY CAN BE USED TO RESOLVE CONFLICT AND PROMOTE PEACE

> • Arm Control
> • Non-Violent Defence
> • Disaster Management
> • Human Rights Protection
> • Global Economy
> • Medicines
> • Avoiding Wars
> • Stopping Terrorism
> • Sustainable Development
> • Convergence of Technologies.

➢ **ARM CONTROL :**

When governments enter into treaties or agreements to control their armaments, then, it is a possibility that the other party may cheat. They may use the nuclear power for military purpose instead of civilian purpose. This can be monitored through two ways- direct inspection of the military facilities or by the use of technology. In case of nuclear testing, many countries try to develop and test it to increase their arsenal power irrespective of its prohibition .This can also be detected with the help of technological devices which may be used to monitor the level of radiation in the atmosphere, sensitive seismic equipment that can detect vibrations in the earth. Thus, we see that technology is a great help in controlling the destructive use of arms and promoting peace.

➢ **NON-VIOLENT DEFENCE** :

Technology is needed for both violent and non-violent actions. The use of technology in violent actions is well known to us. Now, we will discuss how technology helps in nonviolent actions.

• **Communication**

Microphones are used by the speakers in non- violent actions such as speeches, rallies, marches, strikes etc. At the same time it is also used by the police personnel to control the mob and maintain the peace.

Communication is a very natural way of conveying the message of peace among the people and technology gives us tools to communicate and spread the message of love and peace. We can use telephones, fax, short wave radio and electronic mails in effective way in the non-violent struggle. We can also use mass communication media like newspapers, magazines, television etc. to convey the message of peace to the whole nation as well as the world.

• **Survival**

To control the monopoly of any community or country, the basic need of survival can be interrupted. For example, Libya was ruled by Gaddaffi in autocratic manner and to stop this monopoly, the UN countries discontinued supporting Libya in the oil refineries. The economy of Libya is highly based on raw oil production. Under this pressure, government bowed itself and liberated Libya and consequently, the country was declared to be a democracy and followed electoral system. This was possible with the help of technology.

• **Research and Development**

R&D for non-violent defence emphasise on social sciences. Morals, strategies and co-ordination are of great use in any non-violent struggle. In R&D, technology plays an important role as

we involve the participation of more and more people and it can be through any medium like mass media, electronic media or any other source of communication. For example if we want to do any research or survey at the mass level, then, we can use technology there. In the same way if we do any testing then again we can take the help of technology. Thus, in research and development technology plays a vital role.

➤ **DISASTER MANAGEMENT:**

In the age of technology, it has been easier to manage both man-made and natural disasters. We can manage them by using various tools of technology. Internet, GIS, Remote sensing and Satellite communication etc. can help in the hazard reduction measures. GIS techniques act as a decision support tool. Various departments and agencies are stakeholders in using GIS in the disaster management process. GIS, RS and GPS are useful in disaster management applications and for decision making. GIS is useful for hazard zone mapping and during emergency conditions as it helps in risk reduction. Earthquakes, cyclones, tsunami, floods etc. can be determined earlier with the help of technological devices and rescue measures can be taken accordingly either by avoiding or minimizing the affects of these disasters. Technology also helps in reconstruction process after these disasters.

➤ **HUMAN RIGHTS PROTECTION:**

Technology can play an important role in the protection of human rights. It helps in investigations and secures accountability and also insures visibility and mobilizes support to the persons in immediate danger. Many of the human rights violation takes place because people think that they will not be called upon to justify themselves. But now people have access to the camera in their mobiles and they can record such incidents and share these using different platforms of social media. Many organizations are working in this direction of giving training to share the information in such a way that people violating the rights should punished. Earlier this was done only by the professional or investigators. But nowadays, a common man also possesses knowledge of using such devices in the time of need. CCTV and body worn cameras are also available which insure safely as well as privacy. Many alert applications are developing nowadays so that the defenders or journalists can use them to send signals in danger. For example, Amnesty International has developed a panic button application that allows users to secretly send a message to pre-selected contacts by rapidly pressing the phone's power button. There is also GPS button available which is useful in locating the people in danger or need. Thus, the idea of being recorded by any of the passer by on their mobile phone changes our behaviour.

➤ **GLOBAL ECONOMY**

The effects of technology on economy are job creation, contribution to GDP growth, emergence of new services and industries, workforce transformation, business innovation etc. ICT sector is one of the largest employers. ICT has positive effect on growth. For example, 10% increase in broadband penetration is associated with 1.4% increase in GDP growth in emerging markets. Numerous Public services have become available online and through mobile phone. ICT has enabled the emergence of a completely new sector i.e. App Industry. Companies like Amazon, IBM and others have developed new micro work platform which help to divide task into small components then that can be outsourced to contract workers. Thus, increasing the jobs opportunities. The internet provides the companies with new ways of reaching to customers. Over the past few years social media has established itself as a powerful marketing tool.

➤ **MEDICINES:**

Technology has made great contribution in the field of medicine. Improvement in technology is providing us with better screening techniques and other tools for diagnosis. The technologies are

getting more and more advanced for X-ray, clinical PET scanning, nuclear medicines etc. The revolutionary products for magnetic resonance spectroscopy, high intensity targeted ultra sound detection with MRI technologies etc. are giving life saving result to the patient. With the advancement of technology different kinds of therapies like radiotherapy, access surgeries with minimal cuts, interventional MRI, climbing techniques, photonics and there are many more which are in practice. With the increase in science and technology new researches and development took place and reached to the common people. Many diseases which were incurable in earlier days are now curable, hence, making life easier and more peaceful. Example Tuberculosis and Cancer were earlier incurable but now they are curable (in many cases). With the passage of time, much safer medicines have been developed and researches are on for developing many more.

➢ **AVOIDING WARS**

Technology offers very powerful communicative tools so by communicating with the people; wars or conflicts can be avoided. We can use T.V, Radio, newspapers internet etc. to give our opinions as well as listen to other's opinions. Websites, peer networking, discussion forums, blogs, twitter, face book or even many other social platforms can be used to raise the issues or voices. Money can be collected and sent where it is more desperately needed so that the people get satisfied and stop becoming terrorists. The message for giving donations can be conveyed using technology through different media. Technology can be used to avoid internal as well as external wars by conveying the message of love and peace to the people around the world. Countries can mediate between the conflicts prone countries and also help in avoiding war between them and this can be done with the help of technology.

➢ **STOPPING TERRORISM:**

The advancement of technology and arrival of internet have changed the face of terrorism. Technology can be used in both developing terrorism and counter terrorism but the intentions and ways of using technology are different. Government sees technology as powerful tool in the struggle against terrorism. This simply means that the side effects of technology can be overcome by the wise use of technology. Government has to use superior strategy to counter terrorism. There are many helpline services or mobile applications which are launched to locate the place of crime and help the persons in need.

➢ **SUSTAINABLE DEVELOPMENT**

Sustainable development is actually the development that meets the needs of the present without compromising the ability of future generation to meet their needs as well. Resources should be used in such a manner that they should be stored for the future generation as well.

Recently, a panel of scientists has reported major global issues - the provision of sustainable energy, serious climate change, provision of affordable medicines and health delivery system and water scarcity. The present energy system is mainly based on fossil fuels. The solution is based on development of renewable energy based on sun, wind, biomass and tides etc. Carbon capture and storage is not yet proven feasible but would help to mitigate increasing CO_2 emissions. Agriculture in a sustainable society will provide plenty of food supplies at affordable prices at a level of quality that stop damage to the environment. This requires a thoughtful combination of new technologies and ecological sensitivity.

➢ **CONVERGENCE OF TECHNOLOGY :**

Now, a new field "nanotechnology" has arrived which will replace micro-electronics and others fields. It has tremendous application potential in areas of medicine, electronics, and material science. With combination of Nano technology and ICT integrated silicon electronics, Photonics will

be born and with this material convergence combined with biotechnology, intelligent bioscience will emerge, which will help in disease free, happy and more intelligent human beings with longevity and high capabilities.

It is also said that Nano Robots will develop with the convergence of Bio-Nano-Info technology. When Nano robots will be injected into a patient, it will diagnose and deliver the treatment exactly in the affected area and after that, Nano Robots will get digested as they will match with DNA. Thus we see that Researchers are working hard to develop more and more superior quality of technology, with the help of which we can view the dream of happy, healthy and peaceful world, which is filled with positivity.

STRATEGIES FOR PEACE PROMOTION THROUGH TECHNOLOGY

• We should be strict, so that nuclear or other weapons could not be used for mass destruction. On this issue we have to unite so that mankind should be protected against the destructive uses of scientific achievement.

• We have to use science and technology in best possible way for promoting peace. For this, out of the box thinking is required.

• Technology needs to be decentralised for this purpose. When any major task is delegated among the smaller agencies or organisations rather than keeping it on the centre and government level, work can be done at the ground level and positive result can be obtained.

• We have made enormous investment to make technology powerful in terms of money, time and labour. So, it is the need to reorient the technology in the direction of promoting peace.

• It is necessary that we find options from the existing technology which can be used for peace development. For example, electronic mail is an excellent means of communication which can be used to communicate with the activists and find out strategies to work for the welfare of society.

• New technologies can be used to promote peace-minded quality education. ICT is integrated with education in the best possible way which is nowadays being implementing.

• Above all, there is a need to spread awareness towards developing and using technology for promoting peace in the society.

CONCLUSION

In a nutshell, we can say that though science and technology has certain limitations, still it has multiple benefits which can be used to the maximum extent. These limitations can be overcome through the use of science and technology itself. If we take the example of kitchen's knife. then, how we use it is up to our choice. Whether we use it for chopping vegetables or for hurting ourselves is totally dependent on us. Thus, with the technology, how we use it, whether for promoting peace or for destruction, it is totally our wisdom.

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ENCOURAGING A HEALTHY WORK-LIFE BALANCE AS PART OF CAREER DEVELOPMENT PROGRAMS

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Abstract

In today's fast-paced and increasingly interconnected world, the boundary between work and personal life is becoming increasingly blurred. As the demands of the modern workforce evolve, there is growing recognition of the importance of work-life balance for long-term productivity, personal well-being, and job satisfaction. This abstract explores the critical role that educational institutions and career development programs play in preparing students to navigate this challenge, ensuring they enter the workforce equipped not only with technical and professional skills but also with the tools to maintain a healthy balance between work and life.

The traditional view of career development often emphasizes skill acquisition, job readiness, and professional networking, but it rarely addresses the potential risks of burnout, stress, and work-life imbalance. This oversight can have serious long-term consequences for individuals and organizations alike, including mental health issues, decreased productivity, and high employee turnover. Therefore, integrating work-life balance principles into career development programs is not only essential for individual well-being but also for fostering a more sustainable and productive workforce.

This paper will explore several key strategies for promoting work-life balance within educational frameworks: a) Incorporating Time Management and Self-Care into Curricula, b) Fostering Flexibility and Remote Work Awareness, c) Modeling Work-Life Balance through Institutional Policies, d) Addressing the Role of Employers in Supporting Work-Life Balance

In conclusion, preparing students for the future workforce involves more than just technical competence; it requires fostering the skills and mindset needed to maintain a healthy work-life balance. As the nature of work continues to evolve, career development programs must prioritize the integration of these principles to ensure students can achieve both personal fulfillment and professional success in their careers. By embedding work-life balance into the foundation of career education, institutions can contribute to the development of resilient, productive, and satisfied professionals who thrive in all aspects of their lives.

Introduction

In today's fast-paced professional environment, maintaining a healthy work-life balance is increasingly recognized as a crucial factor for employee well-being and organizational success. Work-life balance refers to the equilibrium between professional responsibilities and personal life, ensuring neither domain overshadows the other. Career development programs, traditionally focused on skill-building and upward mobility, are now evolving to include initiatives that promote this balance. This article explores the significance of work-life balance in career development, the challenges employees face, and strategies organizations can employ to integrate balance into their development programs.

Understanding Work-Life Balance

Work-life balance is more than just time management; it encompasses emotional, mental, and physical well-being. Achieving this balance is essential for reducing stress, preventing burnout, and fostering personal and professional growth. A healthy balance enables employees to:

- **Enhance productivity:** Individuals with a balanced life are more focused and efficient at work.
- **Boost creativity:** Time away from work often leads to fresh perspectives and innovative ideas.
- **Improve relationships:** Strong personal relationships contribute to overall life satisfaction.
- **Maintain health:** Balanced routines reduce the risk of stress-related illnesses.

Despite its importance, many professionals struggle to maintain this balance due to demanding workloads, lack of flexibility, or cultural expectations.

The Role of Career Development Programs

Career development programs aim to prepare employees for professional growth and long-term success. Integrating work-life balance into these programs ensures that employees develop holistically, addressing both professional and personal needs. Benefits of such integration include:

- **Employee Retention:** Workers are more likely to stay with organizations that value their well-being.
- **Enhanced Engagement:** Balanced employees are more engaged and committed.
- **Skill Sustainability:** Preventing burnout ensures employees can perform at their best over time.

Organizations can incorporate work-life balance into career development through policies, training, and resources tailored to employees' diverse needs.

Challenges in Achieving Work-Life Balance

1. Cultural Norms and Expectations

In some workplaces, long hours are perceived as a sign of dedication, creating pressure on employees to prioritize work over personal life. Such cultures can hinder attempts to promote balance.

2. Technology and Connectivity

The advent of digital communication tools has blurred the boundaries between work and personal life, making it difficult for employees to "switch off."

3. Individual Differences

Work-life balance is subjective; what works for one employee may not suit another. Personal goals, family responsibilities, and career aspirations influence how individuals perceive balance.

4. Economic Pressures

Fear of job loss or financial instability may compel employees to overwork, neglecting their personal lives in the process.

Strategies for Integrating Work-Life Balance into Career Development Programs

1. Flexible Work Arrangements

Providing options such as remote work, flexible hours, or compressed workweeks empowers employees to manage their schedules effectively. Flexibility fosters autonomy, a critical factor for work-life satisfaction.

2. Training on Time Management and Prioritization

Equipping employees with skills to manage their time and set boundaries can help them achieve better balance. Workshops or online courses can teach techniques like prioritizing tasks, delegating, and avoiding overcommitment.

3. Health and Wellness Initiatives

Career development programs should include components that address physical and mental well-being. Examples include fitness memberships, mindfulness sessions, and stress management workshops.

4. Promoting a Supportive Culture

Leaders and managers play a pivotal role in fostering work-life balance. Organizations should train leaders to model balanced behavior and create an environment where employees feel supported.

5. Career Path Customization

Recognizing that employees have unique career aspirations, organizations can offer tailored development plans. For instance, some employees may prioritize stability and time for family over rapid career advancement.

6. Regular Feedback and Check-ins

Regular discussions about workload, personal goals, and challenges can help managers identify and address issues affecting employees' balance.

Case Studies: Successful Integration of Work-Life Balance

1. Google's Well-Being Programs

Google offers a range of programs to help employees achieve work-life balance, including on-site wellness centers, flexible work policies, and generous parental leave options. These initiatives are embedded within their broader career development framework.

2. Deloitte's Customizable Career Paths

Deloitte allows employees to design their career paths based on their personal and professional priorities. Options like reduced-hour schedules and sabbaticals demonstrate the company's commitment to balance.

3. Microsoft's Mental Health Support

Microsoft's career development programs incorporate mental health resources, such as counseling and resilience training. These efforts ensure employees are equipped to manage stress while advancing in their careers.

Measuring the Impact of Work-Life Balance Initiatives

To ensure the effectiveness of work-life balance initiatives within career development programs, organizations should implement metrics such as:

- **Employee Satisfaction Surveys:** Gauge perceptions of work-life balance.
- **Retention Rates:** Monitor the correlation between balance initiatives and employee retention.
- **Productivity Metrics:** Assess changes in efficiency and output.
- **Health Indicators:** Track absenteeism and reports of stress-related illnesses.

Future Trends

As the nature of work evolves, the importance of work-life balance will continue to grow. Emerging trends include:

- **Hybrid Work Models:** Combining remote and in-office work to provide greater flexibility.
- **AI-Powered Tools:** Using technology to optimize workloads and reduce repetitive tasks.
- **Focus on Emotional Intelligence:** Training programs to help employees manage emotions and build resilience.

Conclusion

Encouraging a healthy work-life balance as part of career development programs is essential for nurturing a satisfied, productive, and resilient workforce. By addressing the challenges employees face and implementing strategies that promote balance, organizations can create a supportive environment where professionals thrive both personally and professionally. As workplaces continue to adapt to modern demands, integrating balance into career development will remain a cornerstone of organizational success.

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A COMPARATIVE STUDY ON READING HABITS OF UNDERACHIEVERS IN ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS

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Abstract

"Knowledge Grows on the Bookshelf of Patience."

Knowledge of various writing styles and passages is essential for developing a better understanding of developing language passages. This will undoubtedly save you time and help you score well in the most important area of most examinations' Verbal Ability section. The many writing styles are distinct from one another. Those who read more books, have more chances of mental development and better opportunities of success.

Hence, this paper is an attempt to find out relationship between underachievement's of students' reading habits and their academic performance in Secondary School Students. The questionnaire investigated students' reading habit and their attitudes towards reading. Students' academic performances were recorded through the transcripts of their examination in the previous semester. The researchers concluded that students do not read books frequently and Girls students take more interest in reading books than boy students. It is recommended that teachers and parents should create a conducive environment for students to read more and more books for effective learning. Students should also make library their first point of call to get updated from time to time for development of reading habits. Adequate and updated books, journals, newspaper must be available in the libraries, so that students could be attracted for more reading.

Keywords: Reading habits, Students, under achievers, Academic achievements

INTRODUCTION

Education is considered as essential for development of individuals and collective. It facilitates acquisition of required knowledge and skills and it prepares people for constructive citizenship. Thus if strengthens scientific and economic basis of a country. Reading is inherent in all individuals irrespective of their caste, creed, religious, sex and nationality. These are essential for all the individuals as they are consonant with their freedom and dignity and are conductive to physical, moral, social and spiritual welfare. The present study attempts to find out reading awareness of students.

Reading is a way to get better knowledge of one's own experiences and it can be an exciting journey to self-discovery. Reading transfers experiences to the individual so that the reader may expand one's horizons, identify, extend and intensify his or her interest and gain deeper understanding of the world.

Today, in this twenty first century we are living in an age of information and newspapers are provider of current information. Newspaper is a store house of knowledge. General knowledge is most necessary part of education. Reading of newspaper is useful for all time support to develop reading behavior, acquiring knowledge, updating current news and awareness of social activities. The reading as generally, important part in a student's culture and education. Reader can understandable of the current incidents of the nation and the globe. 'Students are the future of a country and reading makes them a high-quality citizen. Reading is a habituated and it manipulates readers to discover and go into the store house of knowledge on every day basis. A habit of reading is most essential life skill. It is not only increases our knowledge, but also it provides Improvement to our life style, thinking and character.

The term 'underachievement' was used in a narrow sense as the low academic performance of high ability students, excluding the average or below average ability students from the class. But, modern educational researchers use the term in a broader sense. It includes subjects of all ability level.

For any ability level, if a person achieves below what is expected of him on the basis of his ability (Intelligence) he is termed as an underachiever.

Academic Achievement is the progress made towards the goal of acquiring educational skills, materials, and knowledge, usually spanning a variety of disciplines. It refers to achievement in academic settings rather than general acquisition of knowledge in non-academic settings.

Academic achievement is the accomplishment or acquired proficiency in the performance of an individual in a given skill or body of the knowledge. Academic achievement means knowledge attained and skill developed in the school subjects usually designed by teachers, by test scores or by marks by the teachers or both achievements can be measured with help of test verbal or written of different kinds since academic achievement in the criteria for selection promotion or recognition in various walks of life the importance of academic achievement cannot be ignored there are several factors that influence the academic achievement of an individual like personality intellectual ability mental health and environment etc.

The term academic achievement has been made up of two words, that is academic and achievement. The term academic had been derived from the word 'academy'. The meaning of the term academy is a school where special types of instructions are imparted and knowledge is acquired. The term academic achievement was defined by two terms.

- **Academic:** It was pertaining to school subject or to fields of liberal arts or to the sphere of ideas and abstractions.
- **Achievement:** It was denoted by knowledge attained or skills developed by pupils usually in the school, measured by test scores or by marks assigned by teachers. Its acquisition of all the behaviour changes belonging to the cognitive, affective and psychomotor domains.

NEED AND SIGNIFICATION OF THE STUDY

- This Research will have a greater significance on education in general, teacher and Secondary education in particular.
- The governments in motivating the Students towards physical/mentally have not been successful in intrinsically motivating the Students.
- This Research attempts to signify that the Reading Habits at Secondary sector will bring qualitative improvement among the Secondary students.

OBJECTIVES OF THE STUDY

1. Comparative study of boys and girls in respect of their underachievers.
2. Comparative study of rural and urban students in respect of their underachievers.

HYPOTHESIS OF THE STUDY:

1. There is no significant difference between boys and girls in respect of their underachievers.
2. There is no significant difference between rural and urban students in respect of their underachievers.

METHODOLOGY:

The present study intends to investigate Reading habit between underachiever and Academic achievement of secondary school students of Shikaripura Taluk, in Kasaba Hobali. Moreover, systematic procedure is required as it helps the researcher to test the hypotheses of the study under investigation.

RESEARCH DESIGN:

The nature of present study is of descriptive survey. The research work the investigator used the descriptive survey research method with convenience in fulfilment of the research questions raised.

SAMPLE AND SAMPLING PROCEDURE

The present study intends to investigate Reading habit between underachiever and Academic achievement of secondary school students of Shikaripura Taluk, in Kasaba Hobali. Sample of 100 Secondary Scholl Students were selected using random sampling technique of collection of data. Samples are involved location, gender, types of school also.

RESEARCH TOOLS

- Reading Habit Scale constructed and validated by researcher.
- 9th Standard Students Passing Marks Card.

DATA COLLECTION

Researcher personally visited the schools to collect the data. Before collecting the data all the needful information's given to students to fill the data sheet without errors.

STATISTICAL TECHNIQUES

Based on the reviews of related literature, personal experience, variables and objectives of the study, the investigator prepare the questionnaire for the collection of relevant data. The inventory was administered individually on the groups of students. The students were asked to read carefully and give their responses genuinely on all items of scored with the help of scoring key given in the manual of the tool. The obtained data was tabulated and analyses. Mean, S.D, and 't' Test were calculated for scores obtained.

ANALYSIS AND INTERPRETATION

- **Objective 1 : Comparative study of boys and girls in respect of their underachievers.**
- **Hypothesis 01: there is no significant difference between boys and girls in respect of their underachievers.**

Table: 01 there is no significant difference between boys and girls in respect of their underachievers.

Academic achievement	Gender	N	Mean	t value
	Boys	46	382.2826	1.509
	Girls	54	397.0185	

* Not significant at 0.05 level

Graph 01: There is no significant difference between boys and girls in respect of their underachievers.
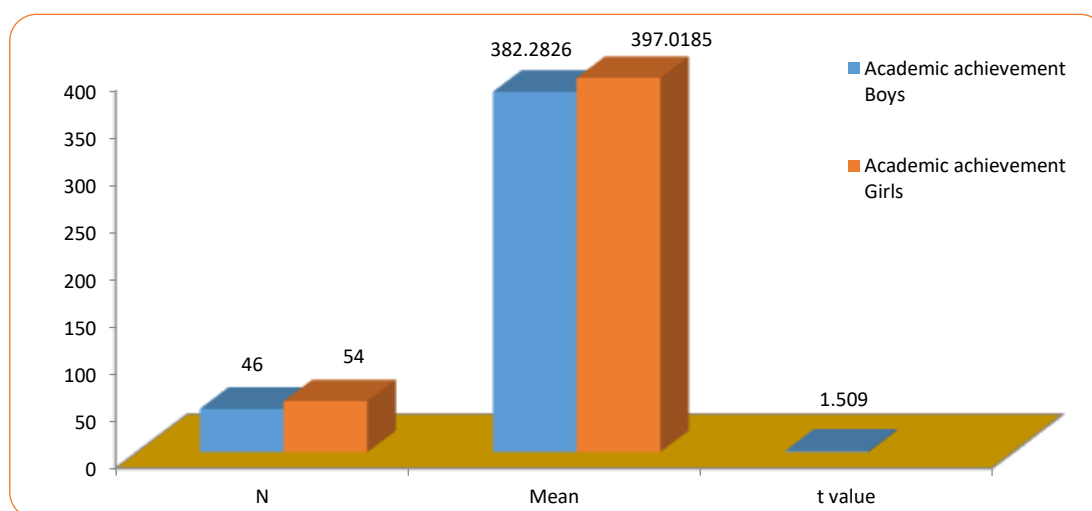
It is evidence for the data of Table – 05 and Graph 05 the obtained 1.509 value is 0.05 is non-significant at 0.05 levels it is nearest of the table 1.96. Hence the hypothesis is accepted.

Further when mean are compared, we can conclude that, underachievers of Boys Students (M =382.2826), and Girls Students (M = 397.0185) there is no significance difference. From this it is concluded that there is no significance difference in Academic achievement the Boys and Girls Students of Shikaripura Taluk.

- **Objective: 02:   Comparative study of rural and urban students in respect of their underachievers.**
- **Hypotheses 02: There is no significant difference between rural and urban students in respect of their underachievers.**

Table 02

	locality	N	Mean	SD	t value
Academic achievement	Urban	50	393.9600	65.74191	0.749
	Rural	50	386.5200	24.80227	

* Not significant at 0.05 level

Graph 02: There is no significant difference between rural and urban students in respect of their underachievers.
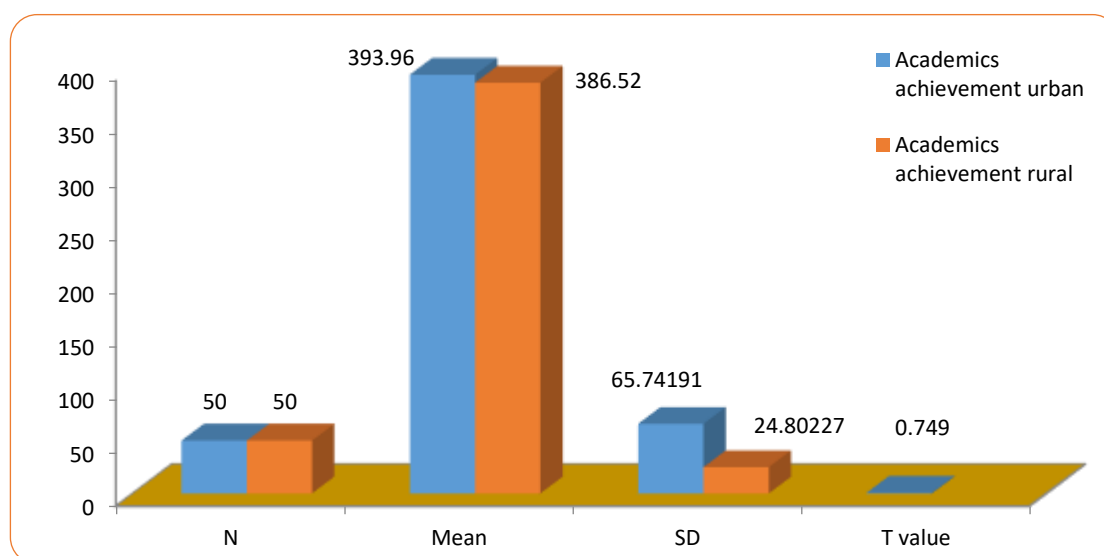
It is evidence for the data of Table – 06 and Graph 06 the obtained 0.749 value is 0.05 is non-significant at 0.05 levels of the table 1.96. Hence the hypothesis is accepted.

Further when mean are compared, we can conclude that, underachievers of rural Students (M = 386.5200), and urban Students (M = 393.9600) there is no significance difference. From this it is concluded there is no significance difference in Academic achievement the rural and urban Students of Shikaripura Taluk.

MAJOR FINDINGS OF THE STUDY :

➢ There is no significant difference between boys and girls in respect of their underachievers.
➢ There is no significant difference between rural and urban in respect of their underachievers.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The Present Study Undertaken to determine the Relationship of Reading Habits for Under Achievers in the Secondary Schools. Reading environment awareness in human beings. The finding of the present study has sample implications for the Students in Secondary Schools. Researcher have taken opinion Gender and type of Schools in the field of Secondary School.

1. The Study clearly reflects the awareness of Reading Habits of Underachivers among government, aided and unaided school students with respect to their varying educational background, teaching experiences, teaching levels and gender.

2. This study was an attempt by the investigator to bring out the ground realities of Underachievers of Reading in government and private schools. It identifies the major problems that the government school teachers & Students encourage while executing Reading habit.

CONCLUSION:

This Study reveals that there is a significant influence of level of underachievers on the level of academic achievement. Reading Habits plays a vital role of academic achievement.

To study the relation between language competence and comprehension on one hand, and between comprehension and reading speed on the other. The focus is on reading models, reading strategies and reading skills. Those aspects which are relevant to these major areas are carefully organized to go in line with our treatment of these issues. We saw that reading cannot be defined as decoding and interpretation only but must also include the element of interaction between the reader and the text.

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THE INFLUENCE OF LIFESTYLE ON ACADEMIC PERFORMANCE AMONG STUDENT TEACHERS

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Abstract

A healthy lifestyle, as defined by the World Health Organization, is a manner of living that reduces the likelihood of severe illness or early death and offers more than just disease prevention. It promotes the overall well-being of the individual including their physical, mental, and social health. Adopting a healthy lifestyle not only benefits the individual but also provides a positive example to those around them, such as family environment and professional environment.

The lifestyle factors of students have a significant influence on their academic performance. For example, a lack of physical activity and unhealthy eating habits negatively affect their academic performance. Sleep also plays a principal role in a healthy lifestyle. High quality sleep leads to improved cognitive processing as a person gets healthier, which leads to excellent academic performance. On the other hand, a lack of sleep is associated with higher anxiety, depression, and stress. Conversely, participation in healthy habits improves their academic performance and reduces absenteeism. Therefore, improving positive habits of students can benefit their academic outcomes.

Numerous other factors also impact students' academic success, including their motivation, physical well-being, and emotional state. In particular, elevated stress levels experienced by Student Teachers can have adverse effects on their cognitive abilities and learning, resulting in lower academic performance. However, including physical activity in Student Teachers routines yields several advantages. It improves cognitive function, enhances learning abilities, boosts self-perception, increases arousal, reduces boredom, alleviates stress, stabilizes moods, promotes better sleep, and enhances attention span and concentration.

Therefore, the primary goal of this study is to assess the impact of lifestyle factors, such as physical activity, sleep behaviour, dietary habits, and anxiety, on the academic performance of Student Teachers (B.Ed. Trainees). The secondary goal is to aid in the development of programs that promote healthier lifestyles among Student Teachers, ultimately improving their academic outcomes and overall well-being.

Keywords: Life style, Academic performance, Student Teachers

INTRODUCTION:

A healthy lifestyle is defined as a way of living that reduces the likelihood of severe illness or early death. Factors required for a healthy lifestyle, such as regular physical activity, better sleep patterns, improved dietary habits, and decreased feelings of anxiety are generally assumed to be important for high academic performance. This study aims to investigate the correlation between a healthy lifestyle and academic success among Student Teachers.

Objective of the Study:
- To find out the relationship between Physical activity, Sleep behaviour, Dietary habits anxiety with the academic achievement
- To find the suggestions to improving the academic achievement with Physical activity, Sleep behaviour, Dietary habits anxiety.

Methodology adopted:

A Google form Survey method was used for the present study for collecting necessary data. The Questionnaire consisted of Physical activity, Sleep behaviour, Dietary habits anxiety aspects that influences academic achievement. The investigator sent the Google forms to the under graduate students of Kumadvathi College of Education, Shikariura and collected the information.

Sample Selected for the Study:

The Sample consists of my study is 86 Student teachers of Kumadvathi College of Education, Shikariura.

Tool of the study:

Google form Questionnaire developed by the investigator was used for collecting data.

Statistical technique:

The obtained data was analysed by using appropriate statistical techniques like Percentages.

Findings of the study:

Physical activity of the Student Teacher

Questions	Response	Academic achievement	
		Above 80 % (44)	Below 80 % (42)
On which physical activity do you involve in leisure-time for recreational purposes.	Gardening	2	5
	Household task	15	17
	Playing games	14	7
	Transportation and commuting	1	3
	Walking	2	4
	Watch TV	10	6

When comparing the above and below 80% academic achievement student teachers above 80% academic achievement students they involved in playing games and also watching TV.

Sleep behaviour of the Student Teacher

Questions	Response	Academic achievement	
		Above 80 % (44)	Below 80 % (42)
Do you go to bed at the same time every night?	Yes	13	14
	No	31	28
Do you like to watch video or listen audio while you go to sleep?	Yes	18	17
	No	26	25
Your average sleep time	4 - 5 hours per day	3	4
	5 -6 hours per day	15	24
	6 - 7 hours per day	17	8
	7 - 8 hours per day	3	6
Is it difficult for you to wake up in the morning?	Yes	21	20
	No	23	22

When comparing the above and below 80% academic achievement student teachers above 80% academic achievement students they sleep 6-7 hours per day.

Dietary habits of the Student Teacher

Questions	Response	Academic achievement	
		Above 80 % (44)	Below 80 % (42)
What meal would you consider to be your main meal of the day?	Breakfast	12	17
	Lunch	8	18
	Dinner	24	7
What meal would you consider to be your main meal of the day?	Freshly home-cooked product	42	41
	Restaurant meal	0	0
	Pre-cooked	0	1
What does your main meal consist of and how is it prepared?	Freshly home-cooked product	42	40
	Restaurant meal	0	2
	Pre-cooked	0	0

When comparing the above and below 80% academic achievement student teachers above 80% academic achievement students prefer dinner as their main meal but below 80% academic achievement students prefer lunch as their main meal.

Anxiety aspects of the Student Teacher

Questions	Response	Academic achievement	
		Above 80 % (44)	Below 80 % (42)
I feel nauseated before a test	Yes	6	6
	No	38	36
I panic before and during a test.	Yes	21	21
	No	23	21
My mind goes blank during a test	Yes	11	30
	No	33	12

When comparing the above and below 80% academic achievement student teachers below 80% academic achievement students they opinions that their mind becomes blank during a test.

Implications of the study:

For the academic achievement of the Students they are influenced so many factors. As per this study listed some of the points here:

- Physical activity directly influences the academic achievement. Students can involve in all the routine activities of daily life without skipping on the part of study. Physical activity improves both physical and mental health of an individual. Indirectly it helps to upgrade the academic achievement.
- Our body needs some relaxation as per the study adult age group it's enough to sleep 6-7 hours per day. Too much or less sleep disturbs the academic achievement. Because of that students need sufficient sleep.

- Freshly home cooked and nutritious food helps students to involve actively in studies. Because of that students can prefer balanced diet in their routine daily life even on time of examination also.
- Anxiety is the natural phenomenon of the human being. But advance preparation and precautionary measures can reduce the anxiety. Make proper preparation for the test / exam and keep calm mentally when entering in to the test/ examination hall.

Limitations of the study:

The study is limited to Kumadvathi College of Edcuation, Shikaripura. It may continue to other locality and other levels like School and under graduate college level.

Conclusions:

This study found that unhealthy lifestyle factors, such as lack of physical activity, inadequate sleep, poor dietary choices, and mental health issues such as anxiety, have a negative impact on academic performance. Therefore, the dissemination of relevant knowledge is needed to promote the importance of a healthy lifestyle and raise students' awareness.

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INNOVATIVE TEACHING METHODOLOGIES AND PRACTICES FOR SCHOOL EDUCATION IN THE INDIAN SCENARIO

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Abstract

In a rapidly changing world, the methods of teaching are evolving alongside advancements in technology and shifts in societal expectations. The Indian education system, rich in tradition and diversity, faces the dual challenge of maintaining its cultural heritage while embracing innovation. As educators strive to engage students more effectively, a focus on innovative practices and methodologies becomes paramount. In this article, we will explore the historical of teaching practices in India, the diverse methodologies employed, the challenges faced by educators, and innovative approaches that are transforming classrooms. And various fascinating approaches that have the potential to transform school education in India.

Innovative teaching practices and methodologies have the power to rejuvenate the Indian education system. By embracing strategies such as experiential learning, flipped classrooms, technology integration, community collaboration, and inquiry-based learning, educators can create an environment that inspires students. From experiential learning to the integration of technology, we will uncover methods that not only enhance academic performance but also nurture holistic development.

***Key Words:** Historical Context of Education, Contemporary Teaching Practices, Technology-Enhanced Learning, Inclusive Education Practices and Experiential Learning.*

INTRODUCTION

Innovative teaching methodologies and practices are essential for enhancing the quality of school education in India, a country characterized by its diverse cultural, linguistic, and socio-economic landscape. As the educational landscape evolves, there is a growing recognition of the need for teaching approaches that not only engage students but also cater to their varied learning styles and needs.

In the Indian context, innovative methodologies such as project-based learning, experiential learning, and the integration of technology in the classroom are gaining traction. These approaches encourage active participation, critical thinking, and collaboration among students, moving away from traditional rote learning methods. Additionally, the incorporation of local contexts and real-world problems into the curriculum helps make learning more relevant and meaningful. Furthermore, the National Education Policy (NEP) 2020 emphasizes the importance of holistic and multidisciplinary education, advocating for the use of innovative practices that foster creativity and problem-solving skills. By embracing these methodologies, educators can create a more inclusive and dynamic learning environment that prepares students for the challenges of the 21st century. In summary, the adoption of innovative teaching methodologies in Indian schools is crucial for fostering an engaging and effective educational experience, ultimately contributing to the overall development of students and the nation.

1. The Historical Context of Education in India

Traditional Teachings: The Gurukul System

- The roots of education in India can be traced back to the ancient Gurukul system, where students lived with their teachers (Gurus) in a community setting.
- Focused on a holistic approach, this system emphasized moral education, physical development, and spiritual learning alongside traditional subjects.

The British Colonial Influence

- The British colonial period brought significant changes, introducing an education system that largely followed Western ideals.

- Emphasis shifted to rote memorization and standardized testing, often sidelining the practical and holistic approaches of the Gurukul pedagogy.

Post-Independence Evolution

- After gaining independence in 1947, India witnessed an education reform agenda aimed at removing disparities and making education accessible to all.
- The 1986 National Policy on Education emphasized child-centered learning and the inclusion of various teaching methodologies.

Contemporary Teaching Practices: Diverse Methodologies in Use

Within India's multifaceted educational landscape, various teaching methodologies have emerged:

1. Lecture-Based Teaching

- The traditional lecture methodology, where educators deliver content to passive learners, remains prevalent, especially in higher education.
- While effective for imparting information, it often lacks interactivity, limiting student engagement.

2. Active Learning Techniques

- Incorporating hands-on activities, group discussions, and problem-solving sessions can enhance student participation.
- Example: The **Think-Pair-Share** technique encourages students to think about a question, discuss their ideas with peers, and share with the larger group, fostering collaboration.

3. Technology-Enhanced Learning

- With the rise of digital education, technologies like **smart classrooms**, **learning management systems (LMS)**, and educational apps have transformed how lessons are delivered.
- **Flipped classrooms**—where students first learn content at home and engage in hands-on activities in class—are gaining popularity.

4. Inclusive Education Practices

- Recognizing diverse learning needs is crucial in today's classrooms. Teaching methodologies like Universal Design for Learning (UDL) support differentiated instruction, catering to all students, including those with disabilities.

5. Experiential Learning

- This approach emphasizes learning through experience and reflection. Activities such as field trips, internships, and project-based learning allow students to apply knowledge in real-world contexts.

Challenges in Indian Teaching Practices

Despite the array of methodologies available, numerous challenges persist in the Indian education system:

1. Large Class Sizes

- Teachers often handle classrooms with 40-50 students, making individual attention difficult and limiting personalized instruction.

2. Curriculum Rigidity

- The standardization of curriculum across states can stifle creativity and adaptability in teaching methods. Educators sometimes feel bound by textbooks, which can lead to monotonous teaching styles.

3. Teacher Training and Development
- Many teachers lack adequate training in innovative teaching methodologies. Continuous professional development is crucial for educators to keep pace with new trends and technologies.

2. Innovative Teaching Practices and Methodologies

The Need for Innovation in Indian Education

India boasts one of the largest education systems in the world, serving over 250 million students. Despite significant progress, challenges such as rote learning, lack of engagement, and inadequate resources persist.

- **Rote Learning**: A predominant method where students memorize information without comprehension.
- **Engagement**: Students often find lessons uninspiring, leading to disinterest and high dropout rates.
- **Resource Allocation**: In many rural areas, schools lack basic infrastructure and trained teachers.

Addressing these issues is critical for fostering an educational environment where creativity and critical thinking flourish.

The Role of Innovative Practices

Innovative teaching practices can bridge the gap between traditional methods and modern educational needs. These approaches aim to create a learner-centered environment that motivates students and nurtures their curiosity.

Innovative Teaching Practices in Indian Schools

1. Experiential Learning

Experiential learning places students at the center of their educational journey by allowing them to learn through experience. This method encourages students to engage with real-world problems and learn by doing.

Benefits of Experiential Learning
- **Enhanced Retention**: Students are more likely to remember information learned through hands-on activities.
- **Skill Development**: Encourages critical thinking, collaboration, and problem-solving skills.

Examples in the Indian Context
- **Field Trips**: Schools that organize trips to historical sites or industries help students connect theoretical knowledge with practical applications.
- **Project-Based Learning**: A group of students working on a project addressing local environmental issues fosters teamwork and critical analysis.

2. Flipped Classroom Model

The flipped classroom is a progressive approach that reverses traditional teaching methods. Instead of introducing new content in class, students review materials at home and engage in interactive learning during classroom time.

Key Features
- **Pre-Class Learning**: Students watch lectures or read materials at home.
- **In-Class Application**: Class time is dedicated to discussions, group projects, and problem-solving.

Advantages for Indian Students
- **Flexible Learning**: Students can learn at their own pace, addressing their unique learning needs.
- **Enhanced Engagement**: Active participation in class leads to improved student involvement.

3. Technology Integration

The integration of technology in classrooms has seen exponential growth, especially during the pandemic. Leveraging technology can enhance teaching and learning experiences.

Tools and Platforms Used
- **Video Conferencing Tools**: Platforms like Zoom and Google Meet enable remote learning.
- **Educational Apps**: Tools like Khan Academy and BYJU'S provide students with personalized learning paths.

Potential Challenges

While technology offers great potential, challenges such as lack of internet access and digital literacy must be addressed to ensure equitable access.

4. Collaborating with the Community

Building partnerships with local organizations and community members provides students with diverse experiences and resources that enrich their education.

Examples of Community Involvement
- **Guest Lectures**: Inviting local experts to share their knowledge can spark students' interest in specific fields.
- **Service Learning**: Engaging in community service projects fosters empathy and social responsibility.

5. Inquiry-Based Learning

Inquiry-based learning encourages students to ask questions, conduct research, and explore subjects in-depth, cultivating a sense of curiosity and a love for learning.

How It Works
- **Student-Centred Approach**: Teachers act as facilitators, guiding students in their research.
- **Real-World Problems**: Students tackle current issues, making learning relevant and engaging.

Challenges to Implementation

Institutional Resistance

Change can be met with scepticism within traditional educational institutions. Overcoming resistance requires:
- **Professional Development**: Training teachers in innovative practices.
- **Community Awareness**: Engaging parents and local communities to support changes in education.

Resource Constraints

Schools, particularly in rural areas, face resource limitations that hinder the implementation of innovative methodologies. Solutions include:
- **Government Support**: Increased funding for infrastructure and resources.
- **NGO Partnerships**: Collaborating with non-profit organizations to secure training and materials.

CONCLUSION

Innovative teaching practices and methodologies have the power to rejuvenate the Indian education system. By embracing strategies such as experiential learning, flipped classrooms, technology

integration, community collaboration, and inquiry-based learning, educators can create an environment that inspires students.

The journey toward educational innovation calls for collaboration, commitment, and creativity. As we look ahead, it is essential for stakeholder's teachers, administrators, parents, and the community to join forces in championing these transformative approaches. The ultimate goal is to cultivate a generation of learners who are not only knowledgeable but also equipped to navigate the complexities of the modern world. If we're an educator, Teacher or a parent, consider implementing one of these innovative practices in your classroom or at home. The future of education relies on our ability to adapt, engage, and inspire the next generation. By fostering an educational landscape rich in innovation, we can ensure that every child in India has the opportunity to thrive and succeed.

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"Innovative Teaching Strategies in Higher Education" by Dr. S. K. Sharma - This book discusses various innovative teaching strategies that can be adapted for school education, focusing on the Indian context.

"Pedagogy of the Oppressed" by Paulo Freire - While not specific to India, Freire's work on critical pedagogy has influenced many educators in India to adopt more participatory and student-centered teaching methods.

"Teaching and Learning in the 21st Century: Innovative Practices" by R. K. Sharma - This publication explores modern teaching practices that can be implemented in Indian schools to enhance learning outcomes.

Research Articles in Journals - Journals such as the "Indian Journal of Educational Technology" and "Journal of Educational Research and Practice" often publish studies and articles on innovative teaching methodologies in Indian schools.

Government Reports - Reports from the Ministry of Education, Government of India, often highlight innovative practices being implemented in various states and provide case studies.

Case Studies from NGOs - Organizations like Pratham and Teach for India publish case studies and reports on innovative teaching practices they implement in schools across India.

CURRICULUM APPROACHES

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Introduction:

Education is a purposeful activity directed at achieving certain aims, such as transmitting knowledge or fostering skills and character traits. These aims may include the development of understanding, rationality, kindness, and honesty. Various researchers emphasize the role of critical thinking in order to distinguish education from indoctrination. Some theorists require that education results in an improvement of the student while others prefer a value-neutral definition of the term. In a slightly different sense, education may also refer, not to the process, but to the product of this process: the mental states and dispositions possessed by educated people.

Education originated as the transmission of cultural heritage from one generation to the next. Today, educational goals increasingly encompass new ideas such as the liberation of learners, skills needed for modern society, empathy, and complex vocational skills. Once we understood the basic meaning of curriculum through varied definitions proposed by educationists, it is apt to understand the design of curriculum. it is essential to know the basic elements and their relationships. In any given curriculum, it is important to identify basic elements which are necessary. There is no consensus on these elements. However here identified the following 3 elements. Like learning experiences, skills and Values and ideas.

Curriculum is connected to learning. Learning is planned and guided, therefore there is a great need to identify in advance what one is seeking in order to accomplish and know how to go about it. Aside from that, the definitions of curriculum refer to schooling, therefore, it is vital to distinguish that the recent approval of curriculum approaches and theories as far as practise materialized in connection with schooling ideas, including subject and lesson.

Then here we study about major Components of the Curriculum like Objectives, Evaluation, Feedback, Content Teaching Methods, Content:

➢ In the same way how we framing the aims and Objectives towards curriculum. Like that we choosing the content also.
➢ Content or Syllabus is the based on the Curriculum.
➢ Its having the events, concepts, ideas and Information. (Truthfulness information)
➢ It develops knowledge and skills among the students and to develops the applying for the social situations.
➢ **Follow these major points while we choosing the suitable content for framing the Curriculum.**
❖ Its having the important knowledge among the students as well as society.
❖ Are the content is useful for the students?
❖ Are the content is interesting for the students?

Approaches to Curriculum Construction:

The path or ways of systematic Organization of content and learning experiences based on educational objectives is called as Approaches of Curriculum Organization.

1.Spiral Approach.
2. Linear Approach.

3. Concentric Approach.

4. Pyramidal Approach.

Curriculum Practitioners and implementers may use one or more approaches in planning, implementing and evaluating the curriculum. Even textbook writers or instructional material producers have different curricular approaches. The following are the five curriculum approaches.

*A curriculum approach shows the viewpoints of curriculum development and design, the role of the learners, the teachers, the curriculum specialists in planning the curriculum. It also includes the goals and objectives of the curriculum

*An approach to curriculum reflects the person's view of the world, including what the person perceives as reality, the values deemed important, and the amount of knowledge he or she possesses.

*It also reflects a holistic position or meta orientation, encompassing the foundations of curriculum, domains of curriculum (common and important knowledge within the field), and theoretical and practical principle of curriculum. An orientation expresses a viewpoint in relation to how curriculum is developed and designed, the role of the learner, teacher, and curriculum specialist in planning curriculum, and the important issues that need to be examined. It is anchored on the behaviourist principles based on the idea of Frederick Taylor whose aim is to achieve efficiency. Based on a blueprint, the setting of goals and objectives are considered important ingredients in curriculum implementation with its matching content and activities. The learning outcomes are evaluated as a change of behaviour indicates the measure of accomplishment.

Systems approach can also be looked upon as a mode of thinking that emphasis problem identification and problem resolution. It enables an individual to define the problem precisely, consider the alternatives available and to choose the most efficient alternative (on the basis of the performance criteria) to solve the problem and achieve the goal(s). The system approach in instruction is an integrated programmed complex of instructional media, hardware and personnel whose components are structured a single unit with a schedule of time and sequential phasing.

The main components of the humanistic approach are that the lessons are Student-centred. Humanism allows students for social personal development. It takes pressure of the students as is not performance-oriented or test-dominated, this provides opportunity for success. The whole process is about Discovery. Students are encouraged to go out there and find out information and it is up to them to decide which information they think is relevant. Ultimately, the teacher or guider must respect student's feelings and aspirations. In this orientation the basic concern is for the human potential for growth.

Therefore, as future educators, let us help and concentrate upon the development of the child's self-concept in preparation for their adult lives. If the child feels good about him or herself then that is a positive start. *Feeling good about oneself would involve an understanding of ones' strengths and weaknesses, and a belief in one's ability to improve.

Conclusion

The above paper mentioned here, gives an overview of the literature on curriculum approaches, the best approach or theory to curriculum design is to combine the best of both according to student's need, teacher's experience and organizational structure and resources. For example, it is useful to design the overall shape of the course, the main aims and learning objectives, broad content areas and time allocation centrally but then devolve out the detailed planning and design to those

teachers who will be delivering the course so that they have ownership of their programme or course. So, we need the approaches for constructing a curriculum at various level.

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A COMPARATIVE STUDY OF EFFECT OF PRANAYAMA EXERCISES AND ENDURANCE EXERCISES ON HEART & LUNGS CAPACITY

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Abstract

Pranayama is a Sanskrit word which consists of prana and ayama. Prana means self-energizing life forces and ayama means extension. Pranayama may be defined as expansion and control of prana through various yogic techniques. In a simple way, we can say that pranayama is a combination of systematic exhalation and inhalation. Increasing awareness to lifestyle disease has led to more participation of people in taking up various forms of Pranayama and exercise to avail more health benefits. The ability to perform physical exercise is related to cardiovascular systems capacity to supply oxygen to muscles and pulmonary systems ability to clear carbon di oxide from blood via lungs.   The purpose of this study is not only to assess the beneficial effects of pranayama and endurance exercises but to compare the improvements in the heart & lung functions among these two modalities of exercises. Researcher Randomly selected men having age group 30 to 40 years having no previous history of Pranayama & endurance exercises, from Shivamogga City. N= 150 These sample are Randomly distributed in to 3 groups, each group of 50. Group-A= 50+Group-B= 50+Group-C= 50. Both pranayama and endurance exercise play an important role in improving the heart and pulmonary functions but effects were more pronounced with pranayama.

Key Words: Pranayama, Endurance Exercise, Heart and Lung capacity.

Introduction

Pranayama is a Sanskrit word which consists of prana and ayama. Prana means self-energizing life forces and ayama means extension. Pranayama may be defined as expansion and control of prana through various yogic techniques. In a simple way, we can say that pranayama is a combination of systematic exhalation and inhalation.

Significance & Importance of Pranayama

Pranayama is one of the important vital components of Yoga that directly or indirectly affects the proper functioning of different systems of the body. If you practice pranayama regularly, it shows beneficial impacts upon respiratory system, circulatory system, digestive system and endocrine system. Pranayama ensures more oxygen to lungs and good for hearts too. Pranayama tones up kidney and control the functions of nervous system. Kumbhaka or retention of breath helps supply of oxygen or exchange of oxygen and carbon dioxide thus facilitates better work of lungs and helps brain to work more efficiently. Pranayama affects autonomic nervous system which controls heart rate, glandular secretions, respiration, digestion and blood pressure.

Review of the Related Literature

Researcher reviewed previous research related to this study & framed the research procedure. Following three previous study summarised as follow

1) Yog Mimansa (2003)

Studied effect of yoga and Aerobics training on cardiores – piratory functions in a base people. As an outcome of one-month programmes of weight have got beneficial effect on blood pressure and peak exipratory flow rate (PEER). Reducing BP and PEER yoga seems to be more effective in improving the respiratory efficiency in improving the respiratory efficiency as judged by PEER than the aerobics. The follow up study reveals that the card ores predatory effect of yoga in long lasting and

deeper as compared to the aerobics. We seen obesity generally in the age group of 35 to 60 years people suffer hypertension and diabetes yoga is beneficial and reconded.

2) Berd, T.K., Gore, M.M., Kulkarni, D.D., & Bhoal, R.S. (2001)

Residential and nonresidential yoga training a Health-related physical fitness of obese patients. In This research they study obesity yoga Health related physical fitness morphological constitutes. he overall result support the residential yoga programme is more useful as a significant system of alternative. medicine in treating obesity more over this study suggest yoga is associated with human culture and easily accessible to common mass yoga is not only for the treatment of obesity this is widely accepted by common people but so. for preventing as well as controlling the associated disorders.

3) Venkatareddy, M.M., Sunita Raje, P.S., Prasad, K.V. (2003)

Effect of yoga on weight and fat fold thickness in obese women. They are studied this go days. They are included bodymass index, fat fold thickness, lean body mass.

• In this research two groups who are obese from childhood who are obese in betar life.

• The overall result is reduction in body weight and fat mass was significantly better in group II as compared to group.

• The practice of yoga mass and pra.nayamass for 3 months is justified in obesity. Although diet restriction is necessary with yoga for controlling obesity however this study indicates reduction in obesity without diet restriction.

No previous study deals with comparison of effect of Pranayama & Endurance exercises on heart rate & vital capacity. So researcher decided to fill up the cap & taken the research project.

Objectives of the Study

The main objective is to compare effect of Pranayama exercises & endurance exercises on heart & lungs capacity of men.

- To understand the capacity of heart & lung
- To study the effect of Pranayama exercises on heart capacity
- To study the effect of Pranayama exercises on lungs capacity
- To study the effect of endurance exercises on heart capacity
- To study the effect of endurance exercises on lungs capacity

Research Design and Procedure of Research

Selection of Sample

Researcher Randomly selected men having age group 30 to 40 years having no previous history of Pranayama & endurance exercises, from Shivamogga City. N= 150 These sample are Randomly distributed in to 3 groups, each group of 50. Group-A= 50+Group-B= 50+Group-C= 50.

Procedure

Pranayama exercises are applied on Group-A for 30 minute per day, Endurance exercises are applied on Group-B for 30 minute per day & Group-C is control group, no Paranayama or endurance exercises are applied on Group-C.

Weekly, Sunday was the holiday, ever day in morning session group-A & group-B called for experiment. Pranayama exercise for group-A applied 6.15 to 6.45 Am & endurance exercises for group-B applied 7.00 to 7.30 Am.

Data Collection

The study is depending on primary data. All the data is collected by principle investigator in two phase as pre-test & post-test. Researcher has collected data for heart capacity as heart rate & for lung capacity as vital capacity. Researcher administered Pranayama exercises as Bhastrika, kapalbhati, anulom-vilom,

Bhramari & Ujjayi Pranayama 30 minute per day on group-A. Researcher administered endurance exercises as Walking briskly Running / jogging for 30 minute per day on group-B

Analysis & Interpretation of Data

Collected Data was analysed with SPSS version three. The significant value-t > 0.05 fixed. The results are tabulated for details understanding

Hypothesis

- The participant well participates regularly in Pranayama & Endurance exercises training
- The Pranayama exercises have more benefit on lungs capacity than endurance exercises.
- The Pranayama exercises have less benefit on heart capacity than endurance exercises.

Limitation & Delimitation of study

- The study deals with 30 to 45 age group men only.
- Limitation of this study is Shivamogga district only.
- Study is limited to Pranayama exercises namely Bhastrika, kapalbhati, anulom-vilom, Bhramari & Ujjayi Pranayama.
- Study is limited to endurance exercises as Walking briskly Running / jogging.
- The study deals with heart rate for heart capacity.
- The study deals with vital capacity for lungs capacity.
- Day today working & lifestyle of participant is beyond the capacity of the researcher hence it is delimitation of the study.
- Day today changing environment, economical status, dietary habits is not controlled by researcher hence these are delimitation of the study.

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COMPARATIVE STUDY OF EFFECTIVENESS OF INQUIRY TRAINING MODEL ON SCIENTIFIC ATTITUDE AMONG SECONDARY SCHOOL BOYS AND GIRLS

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Abstract

"Most important thing is never stop questioning" This inclination is linked to various positive educational results in young people, such as academic success, active participation in school, and enhanced learning. However, studies show that many educators fail to develop Scientific attitude among students, possibly because of a lack of teaching methods that focus on sparking curiosity. Some scholars propose teaching questioning directly as a way to foster Scientific attitude in students, though few research studies have explored the impact of questioning on enhancing Scientific attitude. The present study aimed to explore the efficacy of inquiry training model on scientific attitude among boys and girls of among secondary school students. The investigator has adopted quasi-experimental design to carry out the experiment with the chosen variables. To achieve this sample (80) of secondary school students were selected through purposive sampling technique. The research instruments like scientific attitude scale by S C Gakhar & Amandeep Kaur and the inquiry based lesson plans were employed. The obtained data were analysed systematically with the appropriate statistical techniques. The outcomes of the study were analyzed, discussing their implications for science education and future research. These findings will support more detailed investigations into how scientific attitude and interest can predict learning outcomes in science.

Key words: Effectiveness, inquiry training model (ITM), scientific attitude, Gender.

Introduction:

The core focus of science education is to enhance learners' senses, nurturing their curiosity to explore and understand the environment. Singh (1995) describes inquiry as a disciplined process of questioning, crucial for scientific exploration. By guiding learners to investigate and solve complex problems or phenomena, their minds are directed towards scientific inquiry. Various teaching methods exist to engage learners in scientific inquiry, aiming to develop a scientific mind-set essential for future citizens. Models like the Suchman Inquiry Training Model aim to cultivate students' intellectual strategies in problem-solving and inquiry, emphasizing exploration, questioning, and discovery. Emphasizing the process of discovery, activities like observing, comparing, and predicting are fundamental science skills that develop students' scientific understanding. The development of science process skills not only aids in understanding and discovery but also enhances scientific attitude among the Students irrespective of Gender.

Teachers should be educated on the utilization of teaching models due to their efficiency in typical classroom settings, making them practical and applicable. Implementing these teaching models to train teachers would enhance the learning process. With this in mind, the researcher has focused on investigating the Inquiry Training Model for teaching physics in Secondary schools of two schools of Shikaripura taluk in Karnataka.

Objectives of the Study

To study the effect of Inquiry training model on the Scientific attitude among secondary school Boys and Girls.

Hypothesis of the Study

1. There is a significant difference between the mean values of Pretest and Post test Scores of Scientific attitude among the Boys and Girls of experimental Group.

2. There is a significant difference between the mean values of Pretest and Post test Scores of Scientific attitude among the Boys and Girls of Control Group.

Materials and methods:

The present study is quasi experimental in nature with non-equivalent groups. The investigator has employed randomized pre-test post-test group design. The samples were selected through purposive technique from 2 secondary schools of Shikaripura taluk.. The Scientific attitude scale was developed S C Gakhar & Amandeep Kaur with certain dimensions like curiosity, open-mindedness, faith in scientific method, cause and effect link, critical mindedness, evidence-seeking, objectivity, suspended judgement, and adversion to superstition.. This scale has been utilized for the present study. Preparation of inquiry training model (lesson plan) was developed with the use of text contents prescribed for 9th standard physics state text book. The obtained data were analyzed systematically with the help of appropriate statistical techniques.

Results of the Study

H₁: There is a significant difference between the mean values of Pretest and post test scores of Scientific attitude among the Boys and Girls of Experimental Group.

Table shows the mean pretest & posttest scores of scientific attitude among Boys & Girls

Variation	Gender	N	Mean	SD	df	t-value	p-value	Hypothesis supported
Pretest	Boys Girls	22 18	226.67 234.28	12.606 19.036	39	1.508	0.012*	YES
Posttest	Boys Girls	22 18	225.06 240.61	14.219 12.985		2.392	0.029*	

Note: *Significant at 0.05 level

The above paired sample 't' table 4.13 favors that, the pretest mean scores of Scientific attitude among the gender, where N=40, (M=226.67<212.56, SD=16.221 & 8.740) while posttest mean scores were (M=225.06<234.39, SD= 14.219 & 11.818) of both the groups which greatly differs with 39 degrees of freedom and the obtained t-value is 3.120 & 2.392 and the p-value is 0.006 & 0.029 are lesser than the critical or required value at 0.05 level of significance.

Inference: Thus, it can be concluded that the above stated alternative hypothesis is accepted and stated as there is a significant difference between the pretest & posttest mean scores of scientific attitude among the Experimental Group with reference to gender.
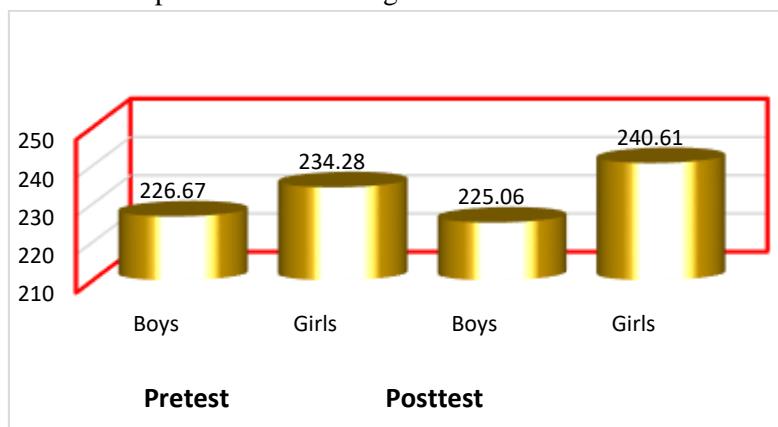
Bar graph: shows the mean pretest & posttest scores of scientific attitude of Experimental Group

H$_2$: There is a significant difference between the mean values of Pretest and post test scores of scientific attitude among the Boys and Girls of Control Group.

Table shows the mean pretest & posttest scores of scientific attitude among Boys & Girls

Variation	Gender	N	Mean	SD	df	t-value	p-value	Hypothesis supported
Pretest	Boys Girls	22 18	196.22 209.72	13.960 9.863	39	3.461	0.003*	YES
Posttest	Boys Girls	22 18	198.22 212.56	16.221 8.740		3.120	0.006*	

Note: *Significant at 0.05 level

The above paired sample 't' table 4.14 supports that, the pretest mean scores of Scientific attitude where N=40, (M=196.22<209.72, SD=13.960 & 9.863) while posttest mean scores were (M=198.22<212.56, SD= 16.221 & 8.740) of both the groups which greatly differs with 39 degrees of freedom and the obtained t-value is 3.461& 3.120 and the p-values 0.003 & 0.006 are lesser than the critical or required value at 0.05 level of significance.

Inference: Thus, it can be concluded that the above stated alternative hypothesis is accepted and can be concluded that there is a significant difference between the pretest & posttest mean scores Scientific attitude of the control Group with reference to gender. It is evident that the above stated alternative hypothesis is accepted. And it can be said that there is a significant difference between the scores in the scientific attitude of the control Group.
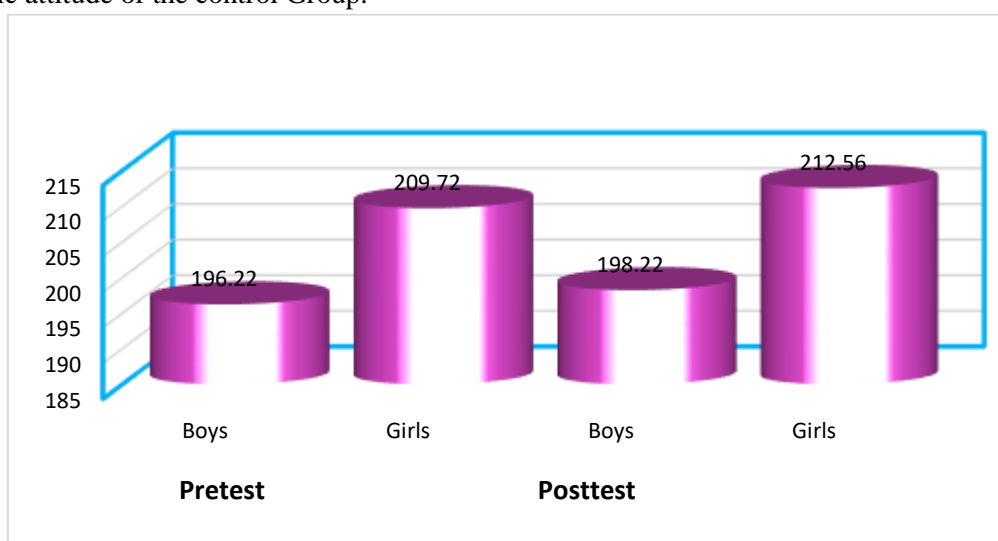
Bar graph shows the mean pretest & posttest scores of scientific attitude of Control Group

Discussion:

The results of the present study reveals that there is a significant difference of post-test mean scores of Scientific attitude among boys and Girls of control and experimental group when taught through inquiry training model approach and it is found evident from the previous studies. The studies viz., Pandey, A., Nanda, G. K., and Ranjan, V. (2011) found that using the Inquiry Training Model for teaching physical science is more beneficial than the Conventional Method in developing Scientific attitude.. The research outcomes suggest that shifting towards an activity-based and interactive approach in regular science classes can positively enhance scientific attitude among Boys and Girls students.

Conclusion:

. The Inquiry Training Model has been successful in sparking Scientific attitude in students, enhancing their understanding of concepts, fostering interest, and encouraging active participation through questioning and interaction in the classroom. The study's findings indicate that shifting traditional science teaching to be more activity-based and interactive will undoubtedly have a positive impact on students' learning outcomes.

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DIGITAL LIBRARIES IN INDIA: A REVIEW

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Abstract

During the past recent years, there has been tremendous development reaming the concept of digital libraries-a knowledge base that can be stored and retrieved through on-line networks. Digital libraries are the most complex form of information systems that support digital document preservation, distributed database management, hypertext, filtering, information retrieval and selective dissemination of information. This has really overcome geographical barrier offering wide range of academic, research and cultural resources with multimedia effects which can be accessed around the world over the distributed networks. A Digital library is a special library with a collection of digital objects that can include text, visual material, audio material, video material, stored as electronic media formats (as opposed to print, or other media.), along with means for organizing, storing, and retrieving the files and media contained in the library collection

Keywords: Digital library, organization, Multidimensional, digital format, E-mail, Remote login, Digital library projects.

INTRODUCTION

With the advancement of science and technology, country has witnessed an unprecedented growth of information resulting in information explosion and the information being generated in different formats has further created havoc in providing cost-effective information services to the user community. As a result, libraries have been constantly facing the problems of space, escalation in cost of books & journals, budget shrinkage, inability to provide multiple copies and most important is retrieval efficiency of user being endangered for want of information. The urge to overcome these problems has called for adoption of technology in libraries. These technologies include

1. CD-ROMs and Digital Video Disk Read Only Memory (DVDROMs)
2. Networking of Computers
3. Image/Text compression
4. Multimedia technology
5. Powerful processors

The powerful technology has enabled Library/Information Centers to create multimedia information databases which provides easy retrieval & access with personal computer connected to the network. This has led to the concept of "Digital Library". In digital libraries, the question of loss of documents is overruled while the searching of information is effective and efficient due to global indexing & search engines.

Digital libraries are systems providing user with coherent access to a very large, organized repository of information and knowledge Digital library is a global virtual library. The library of thousands of networked electronic libraries from the down of civilization, the intellectual brains have poured their omniscience in different directions in shape of print and non-print

Form to enlightened mass to explore multifarious research and development. Several terms have been coined at different times to represent the concept of library without books. Libraries having information in computer readable format or having access to information in digital format have risen to an unexpected high and thereby the traditional libraries were conformed to problems to meet the instant growing demands of the user communities for their multidimensional approaches. Recent

advances in the information world have transformed the role of library in disseminating information to user. Increase in the number of user and their different needs have made modem libraries to apply new communication technology. As a result of this there is a worldwide need and trend to collect organize manage, protect and distribute information in digital form

PURPOSE OF DIGITAL LIBRARY

1. Expedite the systematic development of procedures to collect, store, and organize, information in digital form.
2. Promote efficient delivery of information economically to all users.
3. Encourage co-operative efforts in research resource, computing, and communication networks. Strengthen communication and collaboration between and among educational institutions.
4. Take leadership role in the generation and dissemination of knowledge Components.

Technical issues in the development of digital libraries

Some of the major Technological challenges and issues drawing the attention of workers in this area include.

1. High band with computer network supporting efficient multimedia document transfer
2. Open communication protocols (client-server, e.g. z39.50for IR)
3. Information access tools (browse, display and search tools)
4. Meta database (data based that describe and provide links to other databases/ Information sources
5. Electronic publishing tools (personal, institutional, publisher)
6. Data compression
7. Digital storage
8. Scanning and conversion technologies
9. Media integration technologies (multi-media)
10. Advanced retrieval, indexing, natural language processing, routing and filtering

PLANNING FOR DIGITAL LIBRARY

A digital library committee should be formed to plan for its creation and maintenance. The members must be from various library departments, and, if necessary, consultants can be hired. There are at least two ways of developing a digital library:

1. Converting a traditional library into a digital library, and direct development of a digital library.
2. Planning includes: IT Infrastructure Digitization Access Staffing Furniture, equipment, and space Services Funding.

DIGITAL LIBRARY CHALLENGES

Creating "effective" digital libraries pose serious challenges for existing and future technologies. The integration of digital media into traditional collections will not be straightforward, like previous new media (e.g., video audio tapes), because of the unique nature of digital information, which is less fixed, easily copied, and remotely accessible by multiple users simultaneously. Some specific challenges are resource discovery, digital collection development, digital library administration, copyright and licensing, etc., library of congress specified various challenges for building an effective digital library, which are grouped as broad categories as follows.

BUILDING THE RESOURCE
1. Develop improved technology for digitizing analog materials
2. Design search and retrieval tools that compensate for abbreviated or incomplete cataloging or descriptive information
3. Design tools that facilitate the enhancement of cataloging or descriptive information by incorporating the contributions of users.

INTEROPERABILITY
Establish protocols and standards to facilitate the assembly of distributed digital libraries.

INTELLECTUAL PROPERTY
Address legal concerns associated with access, copying, and dissemination of physical and digital materials.

EFFECTIVE ACCESS
1. Integrate access to both digital and physical materials
2. Develop approaches that can present heterogeneous resources in a coherent way
3. Make the national digital library useful to different communities of users and for different purposes
4. Provide more effective and flexible tools for transforming digital content to suit the need of end users.

SUSTAINING THE RESOURCE
Develop economic models for the support of the national digital library.

SERVICES OF DIGITAL LIBRARY
After converting a traditional library into a digital library the following services can be provided.

E-MAIL
1. The E-mail stands of electronic mail
2. It is a service of Internet as well as Digital library.

The delivery of E-mail from the sender to the receiver consists of three stages.
1. The first stage, the E-mail goes from the user agent to the local server. User agent was SMTP client software and the local server uses SMTP server software.
2. The second stage, the E-mail is relayed by the local server, which now acts as the SMTP client, to the remote server, which is the SMTP (Simple mail transfer protocol) server in this stage.
3. The third stage, the remote user agent uses.

E- Mail access protocol such as POP3 (Post Office Protocol) or IMAPS to access the mailbox and obtain the mail.
1. The first two stages use a SMTP protocol and the third uses E-mail Access protocol.
2. It is not a real-time system; the reason is that there will be some delay in receiving the message. So trend receives can see the mail at any other time.

FILE TRANSFER PROTOCOL (FTP)
FTP is the standard mechanism provided by TCP / IP for copying a file from one host to another.
1. Transferring files from one computer to another is one of the most common tasks expected from a network or internetworking environment.
2. FTP differs from one other client server application in that it established two connections between the hosts.

3. One connection is used for data transfer, the other for control information.

4. FTP uses two well-known TCP ports: port 21 is used for the control connections and port 20 is used for the data connection.

WORLD WIDE WEB

✓ The World Wide Web is a repository of information spread all over the world and linked to other.

✓ The www has a unique combination of flexibility portability and user-friendly features that distinguish it from other services provided by the Internet.

✓ www today is client sever service in which of client using a browser can access a service using a server.

✓ The service provided is distributed over many locations called websites.

AUTOMATED WEB SEARCH (SEARCH ENGINES)

1. It is technique of document searching

2. For document searching the system is used is called search engine.

3. The software will help for retrieve the documents of specific information fast by using broken logic operators and truncation of search terms.

Some main Internet search engines are go phers, go ogle etc.

REMOTE LOGIN

1. When a user's wants to access an application programs utility located remote login.

2. Here the planet (TELNET) client server programs come into use.

3. The users send the keystrokes to the Terminal deliver where the local operating system accepts the characters but does not intercepts them.

The characters are sent to the PLANET client, which transfer from the characters to a universal character set called network virtual Terminal character and deliver them to the local TCP/IP Stack. 6.4 World Wide Web the World Wide Web is a repository of information spread all over the world and linked to other. The www has a unique combination of flexibility portability and user-friendly features that distinguish it from other services provided by the Internet, www today is client sever service in which of client using a browser can access a service using a server. The service provided is distributed over many locations called websites.

DIGITAL LIBRARY PROJECTS:

Various digital library projects are in operation in different countries. Some of the major projects are:

1. National Science Foundation (NSF), Advanced Research Projects Agency (ARPA) and National Aeronautics & Space Administration (NASA) jointly funded digital library project of US Federal Internet Infrastructure Technology includes Six universities viz., University of Michigan; Carnegie Mellon University (creating digital video library of educational videos & BBC video courses) Stanford University; University of California, Berkeley (Multimedia databases) University of Illinois (Database of Science & Engineering journals) ; and University of California, Sant Barbara (Database of Maps & Images information)

2. The Follett Report [1] has tremendous influence in United Kingdom (UK) that has led to the release of funds especially for libraries which have provided a window in digitization projects. Under the auspices of FIGIT, thirty-five Electronic library (Elib) projects have

been started. Eg. Beazley Archive Project, UK

Where do we stand in Digital Library Projects? In India the work of converting conventional libraries into digital ones was still in the formative stage, as the Planning Commission has taken the first & major step towards connecting all the libraries and to provide a linkage through programme called "Vikas Vahini", which is expected to complete by five years. The Indian Institute of Science, Bangalore has set up a digital library, the first of its kind in the country, which uses IBM Digital library software. With good communication links, the IISc's digital library will be accessible from anywhere in the country and around the world. The IISc produces about 1,000 papers a year and around 200 doctoral theses available from digital library along with scientific journals published by the institute. The digital library can be accessed over the net from the URL

STRATEGIC AND PHASED DEVELOPMENT

It is rarely possible to go entirely digital within a short period of time or a single budgetary cycle, but it is possible to develop a multi-year plan that lays out how the digital library will gradually advance in coverage and services from year to year.

The plan can demonstrate incremental growth in alignment with such factors as:

1. Academic priorities;
2. Available institutional budget support;
3. Operational readiness and the ability to increase (or reallocate) internal staff, and to expand technological capacity;
4. Existing institutional infrastructure and services;
5. Special opportunities through partnerships, fundraising and grants.

Almost all academic and professional libraries are digital libraries to some degree, but very few libraries are entirely digital. Those that are given the name, are usually limited to a narrow subject scope and rarely have the full range of functionality that is outlined above. The opportunities of digital information are exciting and vast, and the demand for new academic library services goes well beyond simple provision of digital texts to new services supporting the creation, integration and dissemination of knowledge across many formats. The challenge in the current environment is to define exactly what digital information, services and infrastructure are needed to advance the mission of a given library and of its parent institution, and then to determine how to provide those affordably using the profusion of technologies and resource options available.

INFRASTRUCTURE REQUIREMENTS FOR DIGITAL LIBRARIES

The following are some of the human, financial and technological infrastructure issues that should be taken into account when considering implementing digital library:

1. Availability of appropriate information and communication infrastructure on which the digital library will be built. Basically this will include appropriate hardware, software, and adequate network connectivity.
2. Availability of human resources with appropriate skills. Skills requirements largely depend on the nature and sophistication of the digital library being implemented and may include: hardware specialists, network administrators, database administrators, programmers, content developers, information managers (librarians), etc.
3. Availability of appropriate legal and technical safeguards to guarantee authenticity and integrity of information and to protect privacy, and abuse of intellectual property rights and copyright, where appropriate. In fact, digital libraries raise more difficult and complex copyright issues than traditional libraries.

4. Availability of standards for the management of digital information resources. For good quality information resources, databases and effectiveness of information searching and retrieval, electronic information management standards should be employed. Standards such as metadata standard, object data construction standard, data navigation standard are required.

5. The target community of users should have access to the necessary hardware, software, and network connectivity. In addition, users should have appropriate information skills relevant to the digital environment. They should be able to access and manipulate information in various digital formats text, video, audio, and databases.

CONCLUSION

Digital libraries are logical extension and augmentations of physical library. They extend and augment their physical counterparts by extending existing resources and services and enable Development of new possibilities for information access and Retrieval in other worlds Electronic library based on digitalized data is text replacing the paper based records and that is why with the help of networking one can have access to resources round the clock. The advantage includes resources sharing, documents delivery services and data transmission in a minimal duration. The collection of information image graphics etc. in a digital library without any geographical circumscribe are disseminated in all digitized form through internet which are accessed by the network services provider and millions of users connect their PC's through Digital collection services using local Area Network (LAN) Technology to get a transformed authentic, pin pointed information.

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THEME 1

THEME - 1

EMPOWERING EDUCATION THROUGH INNOVATION

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Abstract

In the 21st century, education is undergoing a rapid transformation, driven by innovation and technological advancements. "Empowering Education through Innovation" explores the pivotal role that creative solutions, digital tools, and new methodologies play in reshaping learning environments. This concept emphasizes the need to move beyond traditional approaches to make education more accessible, inclusive, and impactful.

The integration of technologies like artificial intelligence, e-learning platforms, and virtual classrooms has revolutionized how students learn and educators teach. These innovations enable personalized learning experiences, break down geographical and socio-economic barriers, and prepare students for a dynamic, technology-driven world. Gamification, blended learning, and project-based education further enhance student engagement and foster critical thinking and problem-solving skills.

Government policies, public-private partnerships, and a focus on teacher training are essential to scaling these innovations and ensuring they benefit a broader audience. As we look to the future, trends like virtual and augmented reality, blockchain for certifications, and lifelong learning models will continue to redefine education. Ultimately, empowering education through innovation fosters a generation of learners equipped to thrive in an evolving global landscape.

The abstract highlights the importance of embracing innovation to ensure that education remains a powerful tool for personal growth, societal progress, and global development.

Keywords: Creativity, Innovative teaching, value, knowledge.

Introduction

"In a world flooded with irrelevant information, clarity means power"[1]. Y. N. Harari, in the book 21 Lessons for the 21st Century, asks himself what we should teach? Many pedagogical experts claim that schools should start teaching "the four Cs"[2] - critical thinking, communication, collaboration and creativity. "In general, schools should reduce the role of technical skills and focus on the general skills needed in life. The most important skill of all will be the ability to cope with change, learn new things, and keep your mental balance in unusual situations. To keep up with the pace of change, you will not only have to invent ideas and new products - above all, you will have to reinvent yourself indefinitely."[3] Robert Greene[4], author of the books The 48 Laws of Power and The Laws of Human Nature, notes that: "People are so focused on technology that they no longer focus enough on understanding human nature, which is the no. 1 competence you need in life!" Dynamism, change, digitization and in general all the defining attributes of the period in which we live in, make the evolution of the society a provocative fabric, on which education tries to reshape the fundamental value elements. The unprecedented digital transformation of global economy and society will increase the complexity of our modern world, increasing the speed of change, largely due to increased connectivity and educated people around the world. These two elements - the complexity and speed of change - indicate why connecting education to trends that shape the world we live in, has never been so urgent. "Urgent" means a call for action. But it is not necessarily negative, although surely population growth, societal aging, inequality, climate change and lack of resources, all force us to focus on sustainability

and the needs of future generations. However, the urgency also offers opportunities and a window of action, as evidenced by the power of digitization to transform, connect and empower.

In today's rapidly evolving world, education serves as the cornerstone of individual and societal progress. However, the conventional methods of teaching and learning, once effective, are being challenged by the demands of the 21st century. Students today need not only knowledge but also skills that enable them to thrive in a world driven by technological advancements and global competition.

This transformation is critical to ensuring that students develop critical thinking, problem-solving, and adaptability—skills that are essential for success in today's fast-paced, digital world. Empowering education through innovation represents a bold commitment to preparing future generations for the challenges and opportunities of tomorrow.

The Need for Creativity and Innovation in Education

Education has always been a reflection of societal needs and technological advancements. Historically, the education system has evolved from rote memorization and one-size-fits-all approaches to a more personalized and interactive learning experience.

1. **Adapting to a Rapidly Changing World**:

The rapid advancement of technology and the constantly shifting global economy demand a workforce that is not only knowledgeable but also adaptable and innovative. Jobs that exist today may not exist in the future, while new industries and roles will emerge. Education must equip students with the ability to think creatively, solve novel problems, and embrace lifelong learning in order to thrive in this uncertain environment.

2. **Fostering Critical Thinking and Problem-Solving Skills**:

Creativity is at the heart of problem-solving. By integrating creative thinking into the curriculum, education can move beyond the mere transmission of information and foster an environment where students learn to ask critical questions, analyze situations from multiple perspectives, and generate innovative solutions to real-world challenges. This ability is key in fields ranging from science and technology to social innovation and the arts.

3. **Engaging and Motivating Students**:

Innovation in education helps create more engaging and dynamic learning environments. With the integration of technologies like virtual reality, gamified learning, and interactive digital platforms, students can engage in hands-on, experiential learning. These methods not only make learning more fun but also enhance motivation, retention, and understanding by allowing students to interact with content in new and meaningful ways.

4. **Encouraging Personalized Learning**:

Every student learns differently, yet traditional education often imposes a one-size-fits-all model. Through innovation, education can offer more personalized learning experiences that cater to individual students' strengths, weaknesses, and interests. Technologies like artificial intelligence and learning management systems (LMS) allow for adaptive learning, where content is tailored to each student's pace and learning style, ultimately improving learning outcomes.

5. **Preparing for Global Competitiveness**:

In an increasingly interconnected world, students need creativity and innovation to remain competitive on the global stage. Many of the top careers of the future—whether in technology,

healthcare, or business—will require the ability to innovate. Countries that foster creativity and innovation in education will lead in developing future leaders, entrepreneurs, and innovators who can drive economic growth and address global challenges.

6. **Addressing Complex Societal Challenges**:

Today's students will face complex global issues such as climate change, economic inequality, and public health crises. Creativity and innovation are critical to finding sustainable and innovative solutions to these challenges. Education must cultivate not only knowledge but also the creative thinking and interdisciplinary approaches that will empower students to address these pressing issues in unique and impactful ways.

7. **Building Emotional Intelligence and Collaboration**:

Creativity in education is also linked to the development of emotional intelligence, collaboration, and communication skills. Group projects, creative problem-solving activities, and interdisciplinary approaches help students learn to work effectively with others, navigate diverse viewpoints, and develop empathy. These skills are essential for success in both personal and professional life.

8. **Supporting Lifelong Learning**:

Innovation ensures that education is not confined to the classroom. With the advent of online learning, open-source educational materials, and mobile learning apps, students can continue learning well beyond formal schooling. This culture of lifelong learning is crucial for individuals to continuously adapt to changes in technology, the economy, and society throughout their lives.

Methodology

The study is conceptual. The secondary data has been sourced through websites, eBooks, and publications.

Importance and Benefits of Digital Pedagogy

Benefits of Digital Pedagogy

1. **Enhanced Engagement and Motivation**:

Interactive learning experiences, such as simulations, virtual labs, and multimedia content, make lessons more engaging and dynamic. Digital pedagogy fosters active learning, where students can interact with the material, test hypotheses, and immediately apply their knowledge, leading to greater motivation and deeper understanding of the subject matter.

2. **Flexibility and Convenience:**

Digital pedagogy offers the flexibility of learning anytime and anywhere. Online classes, recorded lectures, and digital resources allow students to access learning materials according to their own schedules, which is especially beneficial for adult learners, working professionals, or those with different time commitments.

3. **Real-Time Feedback and Assessment:**

Digital tools allow educators to provide real-time feedback to students, helping them identify their strengths and weaknesses immediately. Tools like online quizzes, interactive assessments, and automated grading systems provide instant insights, allowing for timely interventions and support where needed.

4. **Encouraging Independent Learning:**

Digital pedagogy encourages students to take charge of their own learning. With access to a vast array of online resources, tutorials, and courses, students can explore topics that interest them beyond the confines of the classroom, fostering a culture of self-directed, lifelong learning.

5. **Collaboration and Communication:**

Digital platforms like discussion boards, collaborative documents, and video conferencing tools enable students to collaborate easily with peers, both in their own classrooms and across the globe. This collaborative approach helps students develop teamwork and communication skills, which are essential for success in any field.

6. **Data-Driven Insights:**

Digital tools provide valuable data on student performance, engagement, and learning progress. Educators can use this data to gain insights into what teaching methods are working, which students may need additional help, and how to improve overall educational outcomes. This allows for more informed decision-making and a more targeted approach to instruction.

7. **Sustainability:**

With digital pedagogy, there is a reduced need for paper, printed materials, and physical infrastructure. This not only cuts down on costs but also supports sustainability efforts by minimizing waste and the environmental footprint associated with traditional education practices.

8. **Innovative Teaching Methods:**

Digital pedagogy allows educators to experiment with new teaching methods and technologies. For example, flipped classrooms, where students engage with digital content outside the classroom and apply their learning during class, or gamified learning, which incorporates game design elements to increase student motivation and engagement, are emerging trends that leverage digital tools for more effective teaching.

Influences of Digital Pedagogy

1. **Teaching Practices:**

Shift from Traditional to Interactive Teaching: Digital pedagogy encourages educators to move away from traditional lecture-based methods to more interactive, student-centered approaches. This includes using multimedia presentations, collaborative projects, and interactive simulations, which engage students more actively in the learning process.

Flipped Classrooms: In a flipped classroom model, students first engage with new content online, typically through videos or readings, and then use class time for discussion, collaboration, and hands-on activities. This approach allows for deeper exploration of topics and encourages active participation.

2. **Student Engagement:**

Increased Motivation and Interest: Digital tools, such as gamification, interactive simulations, and multimedia resources, make learning more engaging and relevant to students. These tools cater to different learning styles and preferences, helping to sustain students' interest and motivation.

Enhanced Collaboration: Digital pedagogy facilitates collaboration among students through online platforms, discussion boards, and group projects. This promotes teamwork, communication, and a sense of community among learners, even in virtual settings.

3. **Learning Environment:**

Flexibility and Accessibility: Digital pedagogy allows for flexible learning environments, enabling students to access course materials and engage with content anytime, anywhere. This flexibility is particularly beneficial for non-traditional learners, such as working adults or those with family commitments.

Diverse Learning Resources: The integration of digital tools provides access to a wealth of diverse learning materials, including e-books, online articles, videos, and educational apps. This diversity enriches the learning experience and allows students to explore topics in depth.

4. **Personalized Learning:**

Adaptive Learning Technologies: Digital pedagogy enables the use of adaptive learning platforms that tailor educational experiences to individual students' needs, preferences, and progress. This personalized approach helps identify knowledge gaps and provides targeted support, enhancing overall learning outcomes.

Self-Directed Learning: Digital resources empower students to take control of their own learning. They can pursue topics of interest at their own pace, fostering a culture of self-directed learning and lifelong education.

5. **Assessment and Feedback:**

Real-Time Assessment Tools: Digital pedagogy allows for immediate feedback through online quizzes, interactive assessments, and peer evaluations. This instant feedback loop helps students identify areas for improvement and fosters a growth mindset.

Data-Driven Insights: Educators can use analytics from digital platforms to track student progress, engagement levels, and learning outcomes. This data-driven approach enables more informed decision-making and targeted interventions.

6. **Professional Development for Educators:**

Emphasis on Continuous Learning: Digital pedagogy encourages educators to engage in continuous professional development by exploring new technologies, teaching methods, and online resources. This commitment to lifelong learning enhances their teaching practices and better prepares them to meet the needs of their students.

Collaboration Among Educators: Online communities and platforms enable educators to collaborate, share resources, and exchange ideas. This collaboration fosters innovation in teaching and helps educators stay updated on best practices in digital pedagogy.

7. **Societal Impacts:**

Bridging Educational Gaps: Digital pedagogy has the potential to address educational inequalities by providing access to quality learning resources for underserved communities. Online courses and open educational resources (OER) can help bridge gaps in education, offering opportunities for students who may not have access to traditional educational settings.

Preparing for Future Workforce: By integrating digital tools and skills into the curriculum, educational institutions are better preparing students for the demands of the modern workforce, which increasingly values digital literacy, collaboration, and innovation.

8. **Cultural Shift in Education:**

Emphasis on Creativity and Critical Thinking: Digital pedagogy promotes a cultural shift in education, where creativity, critical thinking, and problem-solving are valued. This focus prepares students to navigate complex real-world challenges and encourages them to think beyond conventional boundaries.

The influences of digital pedagogy extend beyond mere technology integration; they reshape teaching practices, enhance student engagement, foster personalized learning, and promote a culture of continuous improvement in education. As digital pedagogy continues to evolve, its impact will likely play a crucial role in the future of education, equipping students with the skills and competencies needed to thrive in an increasingly digital and interconnected world.

Suggestions

1. **Enhance Access to Technology**:

Provide Necessary Resources: Ensure that all students have access to digital devices and high-speed internet, especially in underserved communities. This could involve government initiatives, partnerships with tech companies, or community programs that provide equipment and connectivity.

Create Resource Centers: Establish community resource centers where students can access technology, internet, and learning materials, enabling them to engage with digital education.

2. **Implement Comprehensive Training Programs**:

Professional Development for Educators: Offer ongoing training sessions for teachers focused on integrating technology and innovative teaching methods into their classrooms. This should include hands-on workshops and opportunities for peer collaboration.

Mentorship Programs: Pair less experienced educators with tech-savvy mentors who can provide guidance and support in effectively implementing digital pedagogy.

3. **Foster a Culture of Collaboration**:

Encourage Teacher Collaboration: Create platforms for teachers to share resources, strategies, and experiences with digital pedagogy. Collaborative planning sessions can help educators learn from each other and develop innovative curricula together.

Engage Students in Co-Creation: Involve students in the development of learning materials and innovative projects. Their input can help ensure that initiatives resonate with their interests and needs.

4. **Utilize High-Quality Digital Resources**:

Curate a Repository of Resources: Develop a centralized repository of vetted, high-quality digital resources and tools that teachers can easily access and integrate into their lessons.

Collaborate with Content Creators: Partner with educational content creators and organizations to ensure the availability of relevant, engaging, and pedagogically sound digital materials.

5. **Emphasize Personalized Learning**:

Implement Adaptive Learning Technologies: Utilize adaptive learning platforms that tailor content to individual student needs, allowing for personalized learning paths that promote engagement and mastery.

Encourage Student Autonomy: Provide students with choices in their learning experiences, such as selecting topics, projects, or learning modalities, to foster ownership of their education.

6. **Redesign Assessment Practices**:

Develop Innovative Assessment Strategies: Move away from solely standardized testing and implement formative assessments, project-based evaluations, and portfolios that better reflect student learning and skills development.

Provide Timely Feedback: Use digital tools to deliver real-time feedback on assessments, helping students understand their progress and areas for improvement.

7. **Create Inclusive Learning Environments**:

Differentiate Instruction: Use various teaching methods and tools to accommodate diverse learning styles, needs, and preferences, ensuring that all students can thrive in an innovative educational setting.

Support for Diverse Learners: Ensure that digital pedagogy addresses the needs of students with disabilities and English language learners by incorporating assistive technologies and differentiated instruction.

8. **Encourage Continuous Improvement**:

Promote a Growth Mindset: Foster a culture that encourages experimentation, risk-taking, and learning from failure. Highlight success stories and innovative practices to inspire educators and students alike.

Regularly Evaluate and Adapt: Conduct regular evaluations of innovative practices and initiatives to assess their effectiveness. Use data-driven insights to inform adjustments and improvements in teaching methods and curricula.

9. **Engage Parents and Communities**:

Build Partnerships: Foster partnerships between schools, families, and communities to support innovative education initiatives. Involve parents in the learning process through workshops and informational sessions on digital tools.

Community Involvement: Encourage local organizations, businesses, and community members to contribute resources, expertise, and mentorship opportunities to enhance educational programs.

Conclusion

In an era marked by rapid technological advancements and changing societal needs, empowering education through innovation is not just beneficial—it is essential. The integration of innovative practices and digital tools has the potential to transform the educational landscape, making learning more engaging, inclusive, and effective.

The journey toward empowering education through innovation is ongoing and multifaceted. It demands collaboration, commitment, and creativity from all stakeholders in the educational community—educators, administrators, policymakers, parents, and students alike. By embracing the challenges and opportunities presented by innovation, we can create an educational landscape that not only meets the needs of today's learners but also prepares them to thrive in the future. Together, we can transform education into a dynamic, inclusive, and empowering experience for all students, ultimately leading to a brighter and more equitable society.

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CHALLENGES AND OPPORTUNITIES IN DIGITAL EDUCATION

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Abstract

Digital Education refers to the integration of technology with educational practices to enhance teaching and learning outcomes. In the 21st Century, a majority of individuals sue the internet regularly to increase their knowledge and to foster general awareness in this era of globalization. Due to the recent Covid-19 pandemic people and students are facing problems in their study or gaining access to high quality knowledge. We face the many challenges in the field of Education through technology like: Legacy processes and Manual handling. Many businesses still rely on traditional, paper-based processes for document management and complexity of Document formats. And data quality and accuracy, integration with Existing systems and Security and Compliance.

Keywords: Challenges, Opportunities & Digital, Education, Digital Classroom.

The future of digital education is promising, marked by continued advancements in technology and pedagogy. Virtual reality, artificial intelligence, and personalized learning experiences are expected to revolutionize students' engagement with educational content. Additionally, digital education will likely emphasize flexibility, accessibility, and tailored learning experiences to meet the diverse needs of learners worldwide.

Digital learning offers numerous benefits for students, including increased accessibility to educational resources, personalized learning experiences, and enhanced collaboration opportunities. Additionally, digital tools can cater to different learning styles, fostering engagement and a deeper understanding of concepts. However, effective implementation and addressing digital divide issues are essential to ensure equitable access and maximize the benefits of digital learning for all students.

Digital education presents both challenges and opportunities. Challenges include:

- The digital divide.
- Ensuring digital literacy among students and educators.
- Maintaining student engagement in online environments.
- Addressing privacy and security concerns.
- However, digital education also offers opportunities for personalized learning, global collaboration, and access to vast educational resources, and innovative teaching methodologies that cater to diverse learning styles.

The biggest challenges of online education today

The biggest challenges of online education today include bridging the digital divide to ensure equitable access to technology and internet connectivity, maintaining student engagement and motivation in virtual learning environments, addressing digital literacy issues among students and educators, and ensuring the privacy and security of student data in digital classrooms. Additionally, online education must face challenges regarding practical assessment and evaluation methods in digital environments.

Digital Classroom:

During the past two decades, tech tools in schools caused big changes in how we teach and learn. These tools made teaching methods more active and helped teachers look at the whole student.

The latest technologies in classrooms allow teachers to customize lessons for each student's unique needs. As digital classrooms grow more common, education is going through rapid shifts. These changes bring many challenges and opportunities for teachers, students, and policymakers. This article looks at the complexities of digital classrooms. It explores obstacles faced and ways to grow and innovate.

Challenges in the Digital Classroom

Even with all the benefits, digital classrooms face challenges. The gap in students' access to technology at home creates an uneven playing field. Both teachers and students need to learn new skills to use this technology effectively. Keeping students engaged online requires creative teaching methods, and figuring out fair ways to test their knowledge online is another hurdle. Finally, protecting student privacy online requires strong security measures.

1. Technological Divide

The digital classroom presents a pressing obstacle: the clear technological gap among students. While certain individuals have the privilege of readily available high-speed internet, laptops, and tablets, others may not possess these resources. Consequently, a digital divide emerges, posing a hindrance to equal learning opportunities. Educational institutions and policymakers must come together in a collaborative effort to bridge this gap and ensure every student has the essential technology at their disposal.

2. Digital Literacy

As digital learning becomes the new norm, a certain level of digital literacy is now required of both students and educators. This means adapting to new tools, software, and online platforms. For teaching and learning to thrive in this digital age, it is crucial to provide comprehensive digital literacy training.

Although it is an effective tool, educational technology cannot take the place of qualified and committed teachers. Initiatives aimed at reskilling and training teachers will be crucial in 2024 to make sure that instructors are prepared to successfully incorporate technology into their lesson plans.

3. Maintaining Student Engagement

In a conventional classroom setting, educators have the advantage of reading facial expressions and engaging with students directly to assess their level of participation. However, the digital classroom poses a unique challenge as physical presence is replaced by virtual interactions. To keep students engaged, educators must implement creative and exciting methods to sustain their interest and active involvement within the virtual realm.

4. Assessment and Evaluation

Conventional evaluation techniques might not transfer well to the digital sphere. As plagiarism and cheating become harder to spot, educators need to modify the way they assess students. In the digital classroom, creating trustworthy and safe digital assessment tools without sacrificing academic integrity is a major challenge.

5. Privacy and Security Concerns

The digital transformation of education gives rise to serious privacy and security issues. Formerly restricted to paper records, student data is now digitally stored. Strong cyber security measures

must be put in place by educational institutions to safeguard private data and guarantee the privacy of both teachers and students.

Furthermore, preparing students and teachers for online safety and promoting digital literacy will be essential for responsibly navigating the digital learning environment.

Opportunities in the Digital Classroom

Digital classrooms unlock exciting ways to learn. Imagine lessons that adjust to your learning speed and projects where you collaborate with classmates worldwide! The internet offers a treasure trove of information, and students can learn at their own pace, making it perfect for different learning styles. VR simulations and games can even make learning fun and interactive. Digital classrooms can transform learning for everyone.

1. Personalized Learning Experience

Personalized learning opportunities are possible in digital classrooms. Intelligent coaching programs and adaptive learning platforms can customize course material to meet the needs of specific students, resulting in a more effective and individualized learning experience.

2. Global Collaboration

With the help of the digital classroom, students can work together with classmates from all over the world without regard to location. This global connection promotes the development of critical skills for the workforce of the twenty-first century, as well as cultural interchange and respect for diversity.

3. Access to Resources

There is an enormous amount of knowledge and instructional materials available on the internet. With the abundance of resources available to them in digital classrooms, students can investigate various viewpoints and go deeper into topics that pique their interest.

4. Flexibility in Learning

The asynchronous nature of digital learning provides flexibility for students to engage with educational content at their own pace. This flexibility accommodates diverse learning styles and allows individuals to balance education with other commitments.

5. Innovative Teaching Technologies

By incorporating technology in their teaching, educators can utilize cutting-edge methods like virtual reality (VR) simulations, gamification, and interactive multimedia content. Not only do these approaches make learning more exciting, but they also appeal to the diverse learning styles of students.

Future Trends in Education

The future of learning is bright! Imagine virtual reality field trips and AI tutors who personalize your learning. Blockchain technology will securely store your achievements, and data will help schools improve teaching. Schools will also focus on essential skills like critical thinking. Get ready for an exciting future of education that's personal, engaging, and equips you with the skills to thrive.

1. Augmented Reality (AR) and Virtual Reality (VR) use in Education:

The combination of AR and VR technologies is poised to completely transform education, offering students fully immersive learning experiences. From lifelike virtual excursions to hands-on simulations, the possibilities of AR and VR represent a glimpse into the exciting future of experiential education.

2. Artificial Intelligence (AI) Use in Education:

The use of AI is rapidly growing in the realm of education, as it can tailor learning experiences, offer prompt feedback, and support educators in designing customized lesson plans. By evaluating massive amounts of information, AI algorithms can pinpoint individual strengths and weaknesses of students, allowing for specific interventions to be implemented

3. Utilization of Blockchain for Credentials and Certifications:

By utilizing blockchain technology, the verification of academic credentials can be greatly enhanced, resulting in a more secure and efficient process. This has the potential to alleviate problems with credential fraud and facilitate a smoother hiring procedure for employers.

4. Decision-Making through Data Analysis:

Educational institutes can utilize data analytics to make informed choices. By analysing student performance data, they can identify patterns and improve teaching methods and resource allocation.

5. Integration of Soft Skills:

As the world of work continues to evolve, the value of soft skills becomes increasingly clear. It's no surprise, then, that upcoming education developments are expected to prioritize the incorporation of essential abilities like critical thinking, communication, and collaboration into the curriculum. With the rise of technology, digital classrooms offer a prime opportunity to cultivate these skills through dynamic and interactive learning experiences.

Conclusion

The digital classroom brings both tough situations and new chances, showing technology's awesome power in school. We need to bridge technology gaps and support digital know-how while also dealing with privacy issues. Still, there's thrill in the promise of one-on-one teaching, world-wide connections, and modern teaching methods. As we look to the future, we shouldn't forget the surprising effects of up-and-coming trends like augmented reality, artificial intelligence, and decision-making based on data, which will totally redefine learning. To fully harness the benefits of digital classrooms, we must embrace change and tackle challenges head-on. Transforming your classroom experience with modern digital resources like projectors and audio-visual aids, fostering student engagement and collaboration to enrich the learning journey and elevate your school's reputation. As school leaders drive innovation, we inspire future generations to thrive creatively and contribute to the nation's growth.

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TECHNOLOGICAL INTEGRATION IN TEACHING

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Abstract

Teachers at all levels of education, from preschool to college-level courses, might use a wide range of technological tools to teach content and build skills. This process, called technological integration, can transform students' learning experiences and provide a range of benefits. Learning about technological integration can help an educator create lesson plans that use digital tools effectively to meet curriculum goals. In this article, we define technological integration, explore the four levels of technology integration and several frameworks for this process, provide benefits of this practice and list common digital tools you can use in your classroom.

Key words: *Technology & Teaching*

Introduction: Education, technological integration is the use of technology to deepen learning and achieve pedagogical goals in Teaching. Teachers can incorporate computers, smartphones, virtual reality tools and other innovative devices to help students learn. Effective technological integration supports the existing curriculum and is one part of the educational experience, along with traditional teaching methods and group work. Classrooms that use technology effectively typically have a low ratio of students to devices, so every student gets ample opportunities to use the technology.

Four levels of technological integration: Education professionals often use the acronym SAMR, which stands for substitution, augmentation, modification and redefinition, to represent the four levels of technological integration. Here's what these different levels include:

1. Substitution: At the substitution level of technological integration, teachers might replace a traditional tool with a digital equivalent without changing the goals of the lesson or activity the tool supports. One example of a technological substitution is a teacher who allows students to use word processing programs to write their essays. Digital versions of textbooks without interactive features or linked content also qualify as technological substitutes, since they have the same content as a printed version. Substitution is the most affordable level of technological integration and might be appropriate for large classes with different levels of access to technology.

2. Augmentation: The augmentation level of technological integration uses technology to add extra features or resources, like spell-checking and grammar correction tools in a word processing program. The goals and activities of a lesson plan might stay the same, but students have access to additional content through the technological delivery method. For example, the digital version of a mathematics textbook might have the same text and activities as the paper version, but students using the digital version might be able to click a link next to a sample problem and see a video of someone solving the problem.

3. Modification: The next level of technological integration is modification, in which an educator might change parts of an activity to reflect the capabilities of a technological medium. For example, a teacher might modify a peer-review exercise to use a document-sharing software. Students might use this program to ask questions about a peer's work or highlight sections of text, making the editing process easier. Teachers might also use technological modification to adapt in-person activities to a remote or

hybrid medium. Video-conferencing software often features chat and poll features, which can allow students to ask their teacher questions anonymously.

4. Redefinition: The highest level of technological integration is redefinition, where a teacher might use technology to design activities and shape lesson plans. This level is appropriate for classrooms where students have equal access to digital tools and where educators have significant experience using technology to teach. For example, a fourth-grade class in California might form an educational partnership with a similar class in Mongolia. The two classes can use video-chatting and translation software to teach each other about their culture and geography. In this example, technological tools make the activity possible.

Frameworks for technological integration: Theoretical frameworks are systems of guidelines and standards that can help you design lesson plans and curricula. Along with the SAMR levels, there are a variety of frameworks for technological integration that can help an educator or school administrative team incorporate technology into instruction effectively. Here are two common frameworks for technological integration in education:

TPACK: TPACK, or the technological pedagogical content knowledge framework, is a framework for technological integration that focuses on knowledge areas for educators. TPACK features three main areas of knowledge for teachers:

- Content knowledge is the subject of the lesson, like 17th-century English poetry or biological processes.
- Pedagogical knowledge entails the strategies used to teach the content, like discussion or activities.
- Technological knowledge is the digital tools teachers can use to teach, like laptops or smartphones.

This framework emphasizes the connection between the three areas of knowledge. According to this framework, educators who have solid knowledge in all three areas can create effective plans for technological integration.

Triple E: Developed in 2011, the Triple E framework helps educators measure the effectiveness of current technology use in the classroom. This framework focuses on three areas of technological integration:

- Engagement refers to how well a technological strategy keeps students interested in the material.
- Enhancement describes how much additional value a certain piece of technology provides in a lesson.
- Extension measures how well a technological strategy helps students build knowledge and skills outside the classroom.

  The Triple E framework gives teachers a way to evaluate the success of a technological strategy and create new lesson plans that incorporate digital tools effectively.

Types of technology for integration: Here are some common technological tools for classrooms:

- **Word-processing programs:** Teachers might allow students to type essays and other written work using software with built-in editing tools. Some programs allow students to share documents and collaborate online, which can make group projects easier.

- **Presentation programs:** Students might create videos or slideshows for projects and science fairs. Using a projector or tablet, they can share their multimedia projects with each other.
- **Digital textbooks:** Digital versions of textbooks might include online resources and allow students to highlight text and complete assignments without pencils and paper. Storing content online can also keep students from having to carry heavy books from class to class.
- **Websites:** Students might visit websites to conduct research for papers and projects. Museums and other non-profit organizations often have interactive features and educational content on their websites, which can make them helpful additions to a textbook.
- **Video-conferencing programs:** Students can use video-conferencing platforms to communicate with mentors or students at other schools. In remote or hybrid classes, video-conferencing programs allow students to interact with their classmates and teacher.
- **Course management platforms:** Course management platforms are websites that allow teachers to post course content, share grades and list deadlines. They might also have chat functions and tools for submitting online assignments.
- **Interactive classroom boards:** Interactive boards allow teachers to project websites and other digital content directly to the board at the front of the classroom. They often include special pens that allow teachers and students to annotate content and solve problems.

Benefits of technological integration for the classroom: Here are some key advantages to using technology in the classroom:

Flexibility: Many teachers use online course management platforms, which allow them to change due dates and add content to lesson modules more easily than traditional methods might. For example, if a literature teacher using a traditional textbook wants their students to read a poem that's not included in their anthology, they might photocopy the poem and hand it out to students, a process that might take several class periods if any students are absent. A teacher using a course management platform can simply add a link to the poem in their lesson module and notify all of their students immediately.

Support for multiple learning styles: Some students learn most effectively by listening to a lecture or reading a textbook, but others benefit from interactive activities and peer discussion. Technological integration can allow teachers to provide various options for students, which can improve test scores and classroom engagement. For example, a history teacher might create an online class module for a certain era. In this module, they can provide links to slide presentations from class periods, written study guides, online museum exhibits and other audio-visual resources. Digital chat and videoconferencing programs can make it easier for students to discuss content with each other.

Extended focus: The interactive nature of technological integration can lengthen students' attention spans and keep them focused on a topic or activity. Using technology, teachers can blend different types of activities and instruction to engage students. For example, a biology teacher might create a lesson plan about cell structure for a class of high-schoolers. The lesson plan might include an online pre-test to assess student knowledge about the subject, followed by an animated video that defines the key parts of a cell. After that, students might work in groups, using an interactive digital tool to create 3D models of cells.

Easy access: Technological integration in the classroom can allow students to access their grades, assignment calendar and textbooks from any device, which can make it easier for them to complete

their work. While a student might forget their planner, notebook or textbook, they can't lose or forget material stored on a course management account or digital text. These tools can also allow students to do schoolwork when they're traveling for sports tournaments or family vacations. Some school systems use electronic delivery for permission slips and other parent requirements, which can increase completion rates.

Additional resources: When students have computers and smartphones to help them complete assignments, they may have access to a wider range of resources than traditional textbooks can offer. Students might use internet searches to learn about people and events not covered in their curriculum, broadening their understanding of a concept or historical period. Many textbook publishers include online resources with their books, which are available to students and teachers using a specific edition of a textbook. These resources might include extra activities, videos and interactive games that test students' knowledge.

Administrative support: Technological integration includes both instructional and administrative tools, which can help teachers maintain records and share them with stakeholders easily. Some course management platforms include grade and attendance records, so teachers can record information about students' performance each day. These tools make it easy for educators to calculate quarterly and final grades. Depending on the school's data sharing policy, parents might have constant access to student grades, which can lessen their anxiety over progress reports. Grade management tools can also allow teachers to compile reports for their principals and district administrators.

Conclusion: The integration of technology in teaching has transformed the educational landscape, offering numerous benefits and challenges. Effective technology integration requires a balanced approach, addressing both benefits and challenges. By embracing innovations and adapting to changing educational landscapes, educators can harness technology to enhance teaching and learning experiences, preparing students for success in the digital age.

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THE USE OF AI SOFTWARE IN TEACHING: TRANSFORMING EDUCATION

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Abstract

Through the improvement of teaching strategies, personalization of learning, and efficiency in the classroom, artificial intelligence (AI) is transforming the field of education. The transformational potential of AI in education is discussed in this article, which focuses on key issues including virtual tutors, automated exams, and individualized learning. AI software can promote inclusivity by offering accessible learning solutions, optimize instructional time by automating repetitive chores, and customize educational content to meet the needs of specific students. AI-powered resources like Quizlet, Duolingo, and Khanmigo are prime examples of how gamification, real-time feedback, and adaptive learning pathways are changing education. Additionally, by utilizing immersive technologies like virtual reality (VR) and augmented reality (AR), AI promotes increased student engagement. Notwithstanding the advantages, moral issues pertaining to justice, accessibility, and teacher readiness need to be considered. AI's application in education has enormous potential to improve learning outcomes and build a more diverse, individualized, and data-driven learning environment as it develops.

Keywords: AI in education, Personalized learning, Assessment, Virtual Tutors, etc

Through the introduction of novel approaches to teaching, learning, and classroom management, artificial intelligence (AI) is transforming the educational landscape. Artificial intelligence (AI) software provides a wide range of technologies that improve teaching and learning, from automated administrative activities to individualized learning experiences. This article explores the use of AI in education, including its advantages and prospects for AI-driven instruction.

Education is just one industry that artificial intelligence (AI) is transforming. The use of AI software in the classroom is revolutionizing conventional teaching methods and providing creative ways to improve student outcomes and experiences. Here, we examine the various uses of AI in education as well as some of its possible advantages.

1. Tailored Educational Opportunities:

The potential of AI to provide personalized learning is one of its most significant effects on education. Learning styles, skills, weaknesses, and progress of students can all be analyzed by AI software, which can then customize educational materials to meet each student's specific needs.

2. Increasing the Effectiveness of Instruction:

AI can drastically cut down on the amount of time teachers spend on tedious activities, freeing them up to concentrate more on instruction and student engagement.

3. Smart Content Development and Distribution:

Artificial Intelligence improves the creation and delivery of instructional information, increasing its accessibility and engagement.

4. Improved Inclusivity and Accessibility:

AI is essential to improving educational accessibility for a wide range of students, especially those with impairments or linguistic challenges.

5. Data-Informed Perspectives for Teachers:

AI software helps educators make wise judgments by offering insightful data on the learning behaviors and results of their students.

6. AI assistants and virtual tutors:

Chatbots and virtual tutors driven by AI provide on-demand support, assisting students with learning resources and responding to their inquiries outside of scheduled class times.

7. Computerized Assessment and Grading:

For educators, grading and evaluation are time-consuming responsibilities. These procedures can be automated by AI software, freeing up teachers to concentrate more on teaching and student involvement. Essays, multiple-choice exams, and even comprehensive performance evaluations for students can all be graded by AI.

8. AI's Role in Education in the Future:

AI technology is anticipated to play an increasingly larger role in education as it develops. More advanced adaptive learning environments, AI-driven tests that evaluate students' cognitive abilities in addition to their knowledge, and even more individualized and immersive educational opportunities are possible future developments.

9. Translating Languages and Making them Accessible:

Non-native speakers can access education more easily due to AI-powered translation systems that can overcome language hurdles. By enabling real-time translation of instructional information, these solutions guarantee that every student has equal access to the resources they need to succeed.

10. Increased Involvement and Communication:

Immersion and interactive learning environments can be produced with AI techniques. For example, artificial intelligence (AI)-powered augmented reality (AR) and virtual reality (VR) applications can make abstract ideas come to life and increase student engagement and enjoyable.

Here are some AI tools that are transforming the educational landscape by enhancing teaching and learning experiences:

1. Khanmigo:

Using the capabilities of GPT-4, Khan Academy and OpenAI collaborated to produce Khanmigo, an AI-powered instructional application. It is intended to improve the educational experience for both teachers and students by acting as a virtual tutor and teaching assistant. Khanmigo offers individualized coaching in several areas, such as physics, arithmetic, history, and more. It offers clear instructions, justifications, and engaging learning opportunities.

By providing immediate feedback, responding to inquiries, and adjusting to the needs of each individual student, the tool seeks to make learning more accessible and enjoyable. Khanmigo serves as a teacher's assistant, offering support with lesson planning, coming up with ideas for classroom activities, and suggesting ways to differentiate instruction depending on student performance.

Because of its incorporation within the Khan Academy platform, Khanmigo can facilitate a variety of learning tasks, such as problem-solving in complicated situations and promoting critical thinking and creative writing. It highlights how important it is to personalize and adjust learning, which is in line with Khan Academy's goal of giving everyone, everywhere, free access to top-notch education.

With AI, Khanmigo improves the quality of Khan Academy's instructional programs, making it a potent instrument in the rapidly changing field of digital learning.

2. Duolingo:

Popular language-learning service Duolingo provides free, gamified language instruction via its website and app. Luis von Ahn and Severin Hacker founded Duolingo in 2011 with the goal of teaching over 40 languages, including English, Spanish, French, German, Japanese, and others, through an enjoyable and engaging method. The platform is made for students of all skill levels, from absolute beginners to experts, and it emphasizes improving speaking, listening, writing, and reading abilities.

The lessons on Duolingo are organized like a game, with rewards for finishing exercises, level advancement, and point accumulation for users. This strategy maintains consumers' motivation and interest. A range of interactive exercises are included in the sessions, including sentence translation, picture matching, and pronunciation practice. Duolingo provides customized practice based on each learner's progress to reinforce areas where the user may need more help.

Apart from the basic language courses, Duolingo has extras like reading comprehension-enhancing Duolingo Stories and live practice chances with other learners through Duolingo Events. Additionally, the website offers a premium subscription called Duolingo Plus, which has more features and an ad-free experience. The goal of Duolingo is to enable anybody in the globe to easily and joyfully learn a language.

3. Quizlet:

Quizlet is a popular online learning platform that facilitates the creation, study, and sharing of interactive learning resources by instructors and students. Quizlet, a platform which Andrew Sutherland founded in 2005, offers a flexible way to create digital flashcards, quizzes, and different study modes like games and practice exams. The platform is appropriate for students of all ages because it offers a broad range of courses, including science, languages, history, and mathematics.

The main feature of Quizlet is its flashcard system, which lets users browse millions of user-generated sets or create bespoke sets of terms and definitions. Three study modes are available: "Learn," which adjusts to the user's progress; "Match," a timed game in which players must match phrases and definitions; and "Test," which creates multiple-choice and true/false quizzes.

In addition, Quizlet Live is another game available on the platform that promotes competitiveness and teamwork in the classroom. Quizlet Plus offers features including offline access, improved study tools, and progress tracking for further advantages.

With its web and mobile apps, Quizlet aims to make studying more productive and entertaining by utilizing the concepts of spaced repetition and active recall to improve user retention. Students, instructors, and independent learners utilize it extensively all throughout the world.

4. Gradescope:

A cutting-edge online grading tool called Gradescope was created to make grading easier and more efficient for both teachers and students. Gradescope, which was founded in 2014 by a group of University of California, Berkeley professors and graduate students studying computer science, is now a part of Turnitin. It primarily serves educational institutions, assisting teachers in more effectively and reliably grading homework, tests, quizzes, and coding projects.

Gradescope is compatible with multiple assessment formats, such as code assignments, bubble sheet examinations, and conventional handwritten assignments. Artificial intelligence (AI) and machine learning algorithms are used to help automate and speed up grading, particularly for repetitive tasks like grouping common errors or marking similar responses. Across large classrooms, instructors can maintain a consistent marking scheme and promptly provide precise comments.

Additionally, the platform provides extensive analytics and reporting tools that let teachers spot frequent areas in which their pupils falter and modify their lesson plans accordingly. It can be tailored to different teaching philosophies and course designs because it supports both traditional classroom settings and virtual learning environments.

By giving students timely and comprehensible feedback on their work, Gradescope's user-friendly interface and robust grading capabilities lessen the administrative load on teachers, improve the quality of feedback, and ultimately help to create a more effective learning environment for students.

5. Smart Sparrow:

With the help of the adaptive learning platform Smart Sparrow, teachers can design engaging, customized lessons that are suited to the needs of each individual student. Smart Sparrow was established in 2011 by Australian researcher Dror Ben-Naim with the main goal of using adaptive courseware to make digital learning more successful and interesting. A personalized learning experience is made possible by the platform's advanced feedback and analytics system, which modifies the learning path in response to a student's performance.

Without requiring complex technological knowledge, educators can create and implement engaging, interactive classes using Smart Sparrow. It makes it simple to incorporate multimedia components, simulations, and exams into courses with its drag-and-drop interface and large selection of templates. With the platform's support for real-time feedback, students can better understand their errors and be directed in the right answers, which enhances learning outcomes.

The adaptive engine of Smart Sparrow gathers information about student interactions and offers insights into their learning habits and development. This enables teachers to pinpoint the areas in which pupils are having difficulty and modify the curriculum or offer more help as necessary. The platform is frequently utilized in higher education, especially in STEM subjects (science, technology, engineering, and mathematics), where students' achievement can be greatly impacted by tailored learning routes.

Following its acquisition by Pearson in 2020, Smart Sparrow's skills and reach within the digital learning landscape were further expanded.

6. Squirrel AI:

Squirrel AI is an artificial intelligence-driven adaptive learning platform that is primarily intended for K–12 children and offers tailored learning experiences. Squirrel AI, a Chinese startup founded in 2014, employs AI algorithms to provide individualized teaching that changes based on each student's unique learning style and needs. It creates highly tailored learning routes by combining knowledge monitoring, cognitive mapping, and data analytics.

Through diagnostic tests, the platform determines the strengths and weaknesses of each student and continuously modifies the curriculum and degree of difficulty of classes based on continuous performance. This makes it possible to take a more focused approach, filling knowledge gaps and

providing necessary idea reinforcement. Squirrel AI is a flexible tool for a variety of educational purposes because it covers a wide range of courses, including science, languages, and mathematics.

Squirrel AI places a strong emphasis on mastery learning, requiring students to show a high degree of comprehension before advancing to other subjects. Through interactive and gamified components, its AI-driven method not only improves learning efficiency but also engages students, making education more fun.

The mission of Squirrel AI is to democratize superior education by utilizing technology to lower the cost and increase accessibility to individualized instruction. With its creative, AI-driven methodology, it has been rather popular in China and is still growing internationally with the goal of revolutionizing traditional education paradigms.

7. MATHia:

Carnegie Learning created MATHia, an adaptive learning platform, to improve mathematics education for children in elementary school through high school. By using artificial intelligence, the program may provide individualized learning experiences for each student by customizing problem sets and lessons to meet their specific needs. The main characteristic of MATHia is its personalized instruction engine, which continuously evaluates students' comprehension and modifies the kind and difficulty of tasks according to their performance. This guarantees that students are given suitable challenges and receive focused assistance when required.

The website gives students access to interactive exercises and problems with real-time feedback, allowing them to better understand ideas and make corrections as they go. MATHia furnishes educators with comprehensive analytics and statistics that offer valuable insights into the areas of struggle and progress of their students. This information benefits instructors to take proper decisions and adjust instruction for better support to their students.

MATHia is easily integrated into classroom instruction because it is in line with Carnegie Learning's curriculum and educational standards. With an emphasis on individualized learning routes and strong data-driven insights, it seeks to enhance student performance in mathematics by providing a customized and interesting learning environment.

8. Century Tech:

Using artificial intelligence, Century Tech is a cutting-edge educational technology platform that offers students individualized learning experiences. Established in 2013, Century Tech combines AI-powered resources to design customized learning paths that assist students from elementary school through university. The platform's main feature is adaptive learning, which modifies curriculum and teaching methods in accordance with each student's particular needs, abilities, and development utilizing data analytics and machine learning algorithms.

One of Century Tech's primary characteristics is its adaptive learning engine, which tailors exercises and lesson plans to individuals' individual needs by focusing on areas where they might be weaker. With the use of the platform's real-time feedback and comprehensive performance analytics, educators can track students' progress and pinpoint areas in need of development. A variety of interactive tools and resources are also available from Century Tech, all of which are intended to improve student engagement and learning.

Century Tech wants to increase the effectiveness and efficiency of education by utilizing AI, giving teachers and students the resources they need to produce superior learning results. Its objective is to promote an educational environment that is more responsive and individualized, which will ultimately increase student engagement and academic performance.

Conclusion:

Through the improvement of instructional strategies, customization of learning opportunities, and general classroom efficiency, artificial intelligence software is transforming the education industry. AI has enormous potential to change education, even though there are still obstacles to overcome. It will be essential to concentrate on ethical issues, teacher preparation, and fair access as we continue to utilize AI's potential in education to make sure that all students benefit from it.

The use of AI software in the classroom has the potential to completely change education. Artificial Intelligence has the potential to dramatically improve educational outcomes through personalizing learning experiences, automating administrative work, and increasing engagement. To guarantee that AI is applied fairly and to the benefit of all students, it is imperative that ethical issues are addressed. It is critical that we continue to consider the implications of artificial intelligence (AI) in education and work toward a balanced strategy that uses technology to supplement, not replace, the human components of teaching and learning.

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REIMAGINING EDUCATION: THE ROLE OF VR AND AR

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Abstract

By enabling immersive and dynamic learning environments, virtual and augmented reality (VR/AR) can completely transform the educational landscape. This article explores how these technologies can enhance student motivation, improve learning outcomes, and create more dynamic teaching methods. Learning can be more engaging by simulating virtual reality (VR) worlds where students can conduct experiments, study historical events, or navigate challenging terrain. Augmented Reality (AR) superimposes digital data on the physical world, improving comprehension of intangible ideas and promoting experiential learning. These technologies make abstract concepts accessible and engaging, which increases student motivation and improves learning results. While AR can bring textbook diagrams to life, virtual reality (VR) can take students to remote landscapes or historical civilizations in courses like geography and history. VR simulations offer authentic practice environments for professional training, improving skills and readiness. There are, however, drawbacks, such as the expensive price of VR gear and content creation and worries about a decline in social contact. Despite these obstacles, VR and AR have the potential to drastically improve and alter educational experiences with careful application and investment.

Keywords: Virtual Reality (VR), Augmented Reality (AR), Education, Learning, Educational Technology, Innovation, Immersive learning, Dynamic learning environments, Student Motivation, Learning outcomes, Teaching methods

Introduction

The educational landscape is rapidly evolving, influenced by technological advancements and the need for more engaging learning experiences. Traditional teaching methods often fail to engage digital-native students, prompting educators to adopt immersive technologies like Virtual Reality (VR) and Augmented Reality (AR). VR immerses users in entirely virtual environments, while AR overlays digital information onto the real world, creating interactive and contextual experiences (Dunleavy & Dede, 2014). Both technologies foster active learning, encourage collaboration, and support differentiated instruction, making complex ideas more accessible (Merchant, Goetz, & Cifuentes, 2014).

This paper explores the significant impact of VR and AR on student motivation and learning outcomes. By offering unique opportunities for students to explore complex concepts, conduct experiments in virtual labs, and engage with historical events, these technologies can transform educational experiences. Existing literature and case studies will demonstrate how VR and AR enhance student engagement and promote experiential learning (Mikropoulos & Natsis, 2011).

The application of VR and AR across various educational contexts enables a deeper understanding of abstract concepts. For example, VR simulations can replicate real-world scenarios, enhancing skill acquisition and preparedness in professional training (Huang & Liaw, 2018). This immersion prepares

learners for the complexities of their careers and their ability to adapt to dynamic environments. However, challenges such as accessibility, cost, and the necessity for teacher training must be addressed for effective implementation.

Briefly, as educational institutions strive to meet the demands of the 21st century, VR and AR present powerful tools for enriching learning experiences. By fostering immersive and interactive environments, these technologies not only enhance student motivation and learning outcomes but also revolutionize teaching practices (Squire, 2011). This exploration aims to provide a comprehensive understanding of the transformative role of VR and AR in education and professional development.

Theoretical Framework: Constructivism and Engagement Theory

Constructivist learning theory posits that learners construct knowledge through experiences and interactions with their environment (Piaget, 1970; Vygotsky, 1978). VR and AR provide rich, interactive environments that facilitate experiential learning. Engagement theory suggests active involvement enhances learning effectiveness (Kearsley & Shneiderman, 1998). The immersive nature of these technologies captures students' attention, fostering motivation and academic performance.

Applications of VR and AR in Education

Virtual Reality (VR)

1. Simulations and Role-Playing

   VR enables students to engage in complex scenarios, enhancing critical thinking and problem-solving skills. For example, medical students can practice surgical procedures in a safe environment, building confidence and competence (Mason et al., 2019).

2. Historical and Cultural Exploration

   VR can transport students to historical events or cultural sites, enriching their understanding. Programs like Google Expeditions allow learners to explore significant landmarks virtually, deepening their appreciation of history and geography (Baker et al., 2020).

Augmented Reality (AR)

1. Interactive Learning Experiences

   AR transforms traditional classrooms into interactive environments. Apps like Merge Cube enable students to visualize 3D models of concepts, making abstract ideas more tangible (Duncan et al., 2020).

2. Enhancing Textbooks and Learning Materials

   AR overlays digital content on printed materials, encouraging active engagement and exploration of topics (Schmidhuber, 2019).

Devices and Equipment for Enabling AR and VR

Virtual Reality Devices

1. Oculus Quest 2

   The Oculus Quest 2 is a standalone virtual reality headset developed by Meta (formerly Facebook). Released in October 2020, it features a high-resolution display with 1832 x 1920 pixels per eye and a 90 Hz refresh rate for smooth visuals (Meta, 2020). Equipped with Qualcomm's Snapdragon XR2 processor, it supports wireless gaming without a PC. The headset includes built-in audio and dual integrated speakers for immersive sound. With a library of games and experiences, users can enjoy social interactions, fitness apps, and educational content. Its lightweight design and customizable fit make it user-friendly for extended sessions (Meta, 2020).

2. HTC Vive Pro

The HTC Vive Pro is a high-end virtual reality headset designed for immersive gaming and professional applications. Launched in January 2018, it features dual OLED displays with a resolution of 2880 x 1600 pixels, delivering vibrant visuals and enhanced clarity (HTC, 2018). The Vive Pro is equipped with a comfortable head strap and built-in headphones for an immersive audio experience. It supports room-scale tracking with external base stations, allowing for a large play area. The headset is compatible with a wide range of VR content and offers additional features like eye tracking and a wireless adapter for untethered play (HTC, 2018).

3. PlayStation VR

The PlayStation VR (PSVR) is a virtual reality headset developed by Sony for the PlayStation 4 and PlayStation 5 consoles. Launched in October 2016, it features a 1920 x 1080 pixel resolution and a 120 Hz refresh rate for smooth visuals (Sony, 2016). The headset includes a wide field of view (approximately 100 degrees) and 3D audio technology for an immersive experience. It uses an external PlayStation Camera for tracking motion and supports a range of VR titles. The design emphasizes comfort with adjustable straps and a lightweight build, making it accessible for extended gaming sessions. An upgraded version, PSVR 2, was released in early 2023 (Sony, 2023).

Augmented Reality Devices

1. Microsoft HoloLens 2

The Microsoft HoloLens 2 is a leading augmented reality (AR) headset designed for enterprise use, launched in November 2019. It features a high-resolution display with 2048 x 1080 pixels per eye and a 90 Hz refresh rate, providing sharp and immersive visuals. The headset includes advanced sensors and cameras for spatial mapping, enabling users to interact with holograms in their physical environment. With a comfortable, ergonomic design and a wider field of view, it supports extended use. HoloLens 2 integrates seamlessly with Microsoft Azure and various enterprise applications, making it ideal for training, remote assistance, and collaborative work in various industries.

2. Smartphones and Tablets

Smartphones and tablets have become accessible platforms for augmented reality (AR) applications, thanks to their built-in sensors, cameras, and powerful processors. AR technology enhances the real world by overlaying digital information, images, and animations onto the user's environment, creating interactive experiences.

Devices like the Apple iPhone and iPad support AR through Apple's ARKit, which enables developers to create immersive applications. With features like motion tracking, environmental understanding, and light estimation, users can experience applications ranging from games and educational tools to interior design apps that visualize furniture in real spaces.

Android devices also support AR through Google's ARCore, which offers similar functionalities for creating interactive experiences. This includes augmented games like "Pokémon GO," navigation apps that overlay directions onto the real world, and various educational applications that bring learning materials to life.

Smartphones and tablets' portability makes them ideal for AR experiences, allowing users to engage with content in various settings—whether at home, outdoors, or in professional environments. Many

popular apps use AR for practical purposes, such as virtual try-ons for clothing and makeup, enabling consumers to visualize products before purchase.

As hardware continues to evolve, with improvements in camera quality and processing power, the capabilities of AR applications on smartphones and tablets are expanding, making them powerful tools for entertainment, education, and business. This growing ecosystem underscores the potential of AR to transform how we interact with the world around us, blending digital and physical experiences seamlessly.

3. AR Glasses (e.g., Magic Leap One)

   AR glasses, such as the Magic Leap One, represent a significant advancement in augmented reality technology. Released in 2018, the Magic Leap One features a lightweight design with a comfortable fit, making it suitable for extended use. It utilizes a unique waveguide technology to project high-quality 3D visuals directly into the user's field of view, overlaying digital content onto the real world.

Equipped with spatial mapping and tracking capabilities, the device recognizes and interacts with its environment, allowing users to manipulate virtual objects seamlessly. The Magic Leap One includes built-in spatial audio for an immersive sound experience and comes with a controller for intuitive navigation.

Primarily aimed at developers and enterprises, it supports various applications in industries like healthcare, design, and education, enabling innovative solutions for collaboration and visualization. With continuous advancements, AR glasses are poised to redefine how we interact with digital information in everyday life.

Software Tools for VR and AR in Education

Virtual Reality Software

1. Engage

   Engage is a powerful virtual reality software platform designed for immersive collaboration and education. It allows users to create and host virtual environments for meetings, training, and events, making it ideal for businesses and educational institutions. With support for various VR headsets, Engage enables participants to interact in real time using avatars, facilitating engaging discussions and presentations. The platform offers tools for building customized spaces, integrating multimedia content, and tracking user participation. Its versatile features make it suitable for a range of applications, from corporate training and remote learning to social gatherings, enhancing the virtual experience significantly.

2. Rumii

   Rumii is a collaborative virtual reality software designed to enhance teamwork and productivity in immersive environments. It allows users to create virtual meeting rooms where they can interact as avatars, share screens, and collaborate on documents in real time. Compatible with various VR headsets, Rumii supports features like whiteboards, 3D object sharing, and video conferencing, making it ideal for remote teams and educational settings. The platform emphasizes ease of use, enabling seamless integration of multimedia content and fostering dynamic discussions. With its focus on collaboration, Rumii transforms traditional teamwork into an engaging virtual experience.

3. Unity

Unity is a powerful cross-platform game engine widely used for developing virtual reality (VR) experiences. It supports multiple VR devices, enabling developers to create immersive environments and interactive applications. With a user-friendly interface and extensive asset store, Unity offers tools for 3D modeling, animation, and scripting, making it ideal for both beginners and professionals. Its versatility extends beyond gaming, facilitating applications in architecture, training, and simulation across various industries.

Augmented Reality Software

1. Google Expeditions

Google Expeditions is an augmented reality app designed for educational purposes, allowing users to explore virtual field trips and immersive experiences. It enables teachers and students to view 3D models and interactive content in real-world settings, enhancing learning in subjects like history, science, and geography through engaging, hands-on exploration (Google, 2020).

2. Merge Cube

Merge Cube is an augmented reality platform that allows users to interact with 3D holographic objects by holding a physical cube. Compatible with mobile devices and tablets, it offers educational apps across various subjects, enabling immersive learning experiences in science, history, and art, fostering engagement and interactivity in classrooms (Merge, 2021).

3. ARKit and ARCore

ARKit (Apple) and ARCore (Google) are powerful augmented reality development platforms. ARKit enables iOS developers to create immersive experiences using advanced motion tracking and environmental understanding, while ARCore offers similar capabilities for Android (Apple, 2023; Google, 2023). Both frameworks support realistic object placement, interaction, and light estimation, enhancing AR applications across devices.

Benefits of VR and AR in Education

1. Increased Engagement and Motivation

VR and AR capture students' attention in ways traditional methods often cannot. Novelty and interactivity can improve academic performance and retention (Freitas & Neumann, 2009).

2. Enhanced Understanding and Retention

Immersive experiences facilitate deeper cognitive processing. Studies indicate that students engaging with VR content retain information better and demonstrate a greater understanding of complex subjects (Pérez et al., 2020).

3. Accessibility and Inclusivity

VR and AR cater to diverse learning needs, offering personalized experiences that accommodate various learning styles and support students with disabilities (Baker et al., 2020).

Challenges of Implementing VR and AR in Education

1. **Technological Barriers**

High costs associated with VR and AR hardware and software can limit access for many institutions, especially in low-income areas. Reliable internet connectivity and technical support are essential for effective integration. Many young pupils' access to advanced learning opportunities is restricted because they cannot purchase VR gear. Many intelligent people's ability to further their education is hampered

by this financial obstacle. Giving VR headsets to worthy students is crucial to addressing this issue (Surendra Chimakurthi, 2021**).**

2. **Teacher Training and Professional Development**

   Successful implementation requires adequate training for educators. Teachers must develop the skills to design and facilitate immersive learning experiences (Baker et al., 2020).

Concerns About Health and Safety

There are particular difficulties regarding user safety and health when integrating virtual and augmented reality into the classroom. Extended VR use might cause motion sickness and other physical discomfort (Udaya Shankar & Tewari, 2023).

Technological Addiction

In their study "Can Virtual Reality Have a Positive Influence on Student Engagement?", Grewe and Gie (2020, 2023) noted that a significant concern regarding VR application in education is the potential for technological addiction. Like many other digital technologies, virtual reality (VR) can be incredibly compelling and immersive, which could encourage misuse. If students find virtual activities more exciting or fulfilling than real-world activities, they may struggle to unplug and return to their physical surroundings. While VR could provide a momentary escape from the challenges of daily life, there is a risk that students will become so absorbed in the virtual world that they neglect their responsibilities and relationships in the real world (LITSLINK, 2020).

Impact on Learning Outcomes

Research indicates that immersive experiences provided by VR and AR lead to better retention rates. The engaging nature of these technologies facilitates deeper cognitive processing, enabling students to remember and apply knowledge effectively (Dede, 2009). Furthermore, VR and AR encourage critical thinking by allowing students to experiment and explore scenarios in risk-free environments, fostering analytical thinking and problem-solving skills (Schmidhuber, 2019). These technologies also bridge the gap between theoretical knowledge and practical application, particularly in fields like medicine and engineering. (Shankar et al., 2023). In her 2024 research paper titled "The Integration of VR and AR in Classroom Settings," Dembe (2024) investigated how these technologies could improve learning. With AR, which is accessed through QR codes, collaborative learning is made easier, and difficult subjects become more tangible. Conversely, VR offers an immersive experience that piques the senses and encourages a higher degree of participation. According to the research, learning outcomes, student motivation, and overall educational experiences can all be significantly enhanced by AR and VR.

Innovative Teaching Methods and Case Studies

The integration of Virtual Reality (VR) and Augmented Reality (AR) into education is reshaping traditional teaching methodologies and enhancing learning outcomes.

Innovative Teaching Methods

1. Flipped Classroom Models: VR and AR can significantly enhance flipped classroom models, where traditional lectures are conducted outside the classroom. This allows educators to focus on hands-on activities during class time, fostering deeper engagement and application of knowledge.

2. Gamification of Learning: Incorporating game-like elements into educational activities can greatly enhance student engagement. VR and AR can create immersive, gamified learning experiences that motivate students to participate actively and develop a sense of ownership over their learning.

3. Personalized Learning Pathways: These technologies facilitate personalized learning experiences tailored to individual student needs. By adapting content and activities based on a student's pace and preferences, educators can provide the necessary support for each learner's success.

Case Studies

1. Medical Training with VR: At the University of Michigan, VR simulations have shown promise in medical training. Medical students engage in realistic surgical simulations, leading to improved skills and confidence levels (Mason et al., 2019).

2. AR in History Education: The University of Southern California has successfully integrated AR into history classes. By visualizing historical events through AR applications, students report a deeper connection to the material (Schmidhuber, 2019).

3. VR Life English: A recent study by Li (2023) examined "VR Life English," a VR educational game designed for middle school students to practice speaking English in realistic scenarios. The immersive environment allowed students to experience conversations that are relevant to their everyday lives, indicating that VR technologies can significantly improve engagement and learning outcomes in language education.

Privacy and Ethical Issues in VR/AR Education

Despite the benefits, the use of VR and AR in classrooms presents serious ethical and privacy concerns. User privacy expectations must be carefully considered when utilizing engagement and performance data for instructional purposes. The immersive nature of VR and AR creates additional vulnerabilities for users, including risks of identity theft and hacking (Dembe, 2024).

Hackers can exploit these immersive environments by using false online avatars, making it challenging to identify and apprehend them. Moreover, the collection and use of personal data in VR and AR raise significant privacy concerns. Establishing guidelines for responsible use is essential, covering data collection, usage, and protection while preventing malicious activities (Pérez et al., 2020). Upholding national and international laws will help deter and penalize violations of ethical standards.

By addressing these privacy and ethical issues, we can ensure that VR and AR technologies are used responsibly and effectively in educational settings, promoting a secure and equitable learning environment for all.

Future Directions

The future of Virtual Reality (VR) and Augmented Reality (AR) in education presents several key directions:

1. Continued Research and Development: Ongoing research is vital to assess the long-term impacts of VR and AR on student motivation and learning outcomes. Longitudinal studies can provide valuable insights into the efficacy of these technologies across diverse educational settings.

2. Policy and Funding Initiatives: Policymakers should advocate for increased funding for educational technology and resources for teacher training, ensuring equitable access to VR and AR tools in all institutions (Pérez et al., 2020).

3. Collaboration Among Stakeholders: Collaboration between educators, technology developers, and researchers can lead to the creation of high-quality educational content that aligns with curriculum standards and meets student needs (Dembe, 2024).

Conclusion

The integration of Virtual Reality (VR) and Augmented Reality (AR) in education holds immense potential to transform teaching and learning. By fostering engagement, enhancing understanding, and providing personalized learning experiences, these immersive technologies create dynamic learning environments that prepare students for the future (Dembe, 2024). However, challenges related to cost, training, and accessibility must be addressed to maximize the benefits of VR and AR in education (Pérez et al., 2020). Continued research and collaboration among stakeholders—including educators, developers, and policymakers—will be essential in shaping the future of immersive learning experiences, ensuring that all students have the opportunity to thrive in an increasingly digital world.

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BLOCKCHAIN IN EDUCATIONAL CREDENTIALING: REVOLUTIONIZING TRUST AND TRANSPARENCY IN ACADEMIC RECORDS

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Abstract

Blockchain technology is revolutionizing educational credentialing by enhancing trust, transparency, and efficiency in academic records management. This paper presents key steps for successful blockchain implementation in educational institutions, including readiness assessment, stakeholder engagement, and defining clear objectives. It reveals the importance of selecting appropriate blockchain platforms and navigating complex regulatory frameworks, such as GDPR and FERPA for data protection. Furthermore, the paper highlights the need for robust identity management systems and clear intellectual property policies to safeguard the integrity of digital credentials.

Long-term sustainability strategies—encompassing financial planning, technical maintenance, and effective governance frameworks—are discussed to ensure the ongoing effectiveness of blockchain systems. By addressing these critical areas, this work serves as a comprehensive guide for educational institutions aiming to adopt blockchain technology. It aims to foster trust and transparency in credentialing processes, ultimately enhancing the educational experience for students, faculty, and administrators.

Through strategic planning and collaboration, blockchain credentialing is positioned as a pivotal advancement in the future of academic record management. This technology offers significant benefits for all stakeholders involved in the education ecosystem, facilitating secure and verifiable credentialing practices that can adapt to evolving educational needs.

Keywords: *Blockchain technology, educational credentialing, trust, transparency, academic records, GDPR, FERPA, identity management, sustainability, stakeholder engagement.*

Introduction: In recent years, blockchain technology has garnered significant attention for its potential to revolutionize various sectors, including finance, healthcare, and supply chain management. However, one of its most promising applications lies within the education sector, particularly in the area of academic credentialing. Traditionally, educational institutions have managed academic records through centralized systems that rely on paper-based or digital archives. These systems are often prone to issues such as data tampering, delays in verification processes, and unauthorized access to personal information. Blockchain offers a decentralized, transparent, and secure method of recording and verifying academic credentials. This technology enables immutable, time-stamped records that can be accessed by various stakeholders, such as students, employers, and educational institutions, without the need for intermediaries. By utilizing blockchain, educational institutions can enhance trust and efficiency in the management of academic records, reducing administrative burdens and ensuring the integrity of credentials. This paper seeks to explore the implementation of blockchain in educational credentialing and its implications for improving trust, transparency, and efficiency in academic records management. It outlines critical steps for successful adoption, including readiness assessments, stakeholder engagement, and navigating regulatory frameworks. The paper also discusses the long-term

sustainability of blockchain systems, emphasizing the importance of financial planning, technical maintenance, and governance frameworks. Ultimately, this work provides a roadmap for educational institutions to adopt blockchain technology effectively, positioning it as a transformative tool for the future of credentialing.

Literature Review

The literature on blockchain technology's role in educational credentialing is relatively nascent but growing rapidly. Early studies have primarily focused on blockchain's technical capabilities, while recent research has begun exploring its practical applications in educational contexts. This section reviews key findings from academic studies, reports, and white papers on blockchain in education, particularly in credentialing and records management.

Blockchain Technology in Education

Blockchain technology, first introduced by **Nakamoto (2008)** in the context of Bitcoin, has evolved beyond cryptocurrencies and into broader applications such as smart contracts, decentralized applications, and data management. In education, blockchain has been recognized for its potential to create verifiable, tamper-proof records that can be accessed and shared by multiple parties. According to **Grech and Camilleri (2017)**, blockchain's decentralized nature makes it an ideal tool for securely managing educational credentials, as it eliminates the risks of centralization, such as hacking and data loss.

Blockchain for Credentialing

Research indicates that blockchain's ability to create immutable records has profound implications for educational credentialing. **Sharples and Domingue (2016)** highlight how blockchain allows for the creation of digital diplomas and certificates that can be shared instantly with employers, eliminating the need for intermediaries. Furthermore, these credentials are verifiable in real-time, reducing the time and costs associated with traditional verification processes. A study by **Gräther et al. (2018)** found that blockchain-based credentials also mitigate the risk of credential fraud, as each record is securely encrypted and timestamped on the blockchain, making unauthorized alterations virtually impossible.

Regulatory and Ethical Considerations

Despite its potential, blockchain adoption in education is not without challenges, particularly concerning regulatory compliance and data privacy. The General Data Protection Regulation (GDPR) and the Family Educational Rights and Privacy Act (FERPA) are two significant regulatory frameworks that impact blockchain implementation. Under GDPR, institutions must ensure that personal data is processed lawfully, which can be difficult in decentralized systems where control over data is distributed across a network (Zyskind & Nathan, 2015). Similarly, FERPA imposes strict guidelines on the management of student records, necessitating careful consideration of blockchain's data-sharing capabilities (McMillan, 2019).

Importance of Blockchain in Educational Credentialing:

Blockchain technology is revolutionizing educational credentialing by providing **secure, transparent, and immutable records** of academic achievements. Traditional credentialing systems often face issues like data tampering, delays in verification, and fraudulent credentials. Blockchain addresses these challenges by ensuring that once a record is created, it cannot be altered without consensus, thus offering **greater trust, transparency, and accountability** in managing academic records.

One notable example is the **MIT Digital Diploma Initiative**, where students receive blockchain-based, tamper-proof digital diplomas. These credentials can be instantly shared with employers or institutions, eliminating the need for third-party verification, reducing delays, and safeguarding the authenticity of qualifications. Such initiatives showcase blockchain's potential in streamlining credentialing processes and ensuring the integrity of academic records.

In the education field, blockchain technology can be utilized in several key ways:

1. **Credential Verification:** Universities can issue blockchain-secured degrees and certificates, enabling instant and verifiable proof of qualifications for employers or educational institutions, mitigating risks of fraud. For instance, in regions where credential forgery is prevalent, blockchain can ensure trust in the authenticity of academic achievements.

2. **Lifelong Learning Portfolios:** Blockchain allows students to maintain decentralized, lifelong learning portfolios that include micro-credentials, certifications, and other achievements from multiple learning platforms. This empowers individuals to continuously showcase their educational progress in a verified, digital format.

3. **Decentralized Academic Records:** Blockchain can decentralize student records, providing secure and permanent access to academic achievements while protecting student privacy from data breaches.

By integrating blockchain into educational credentialing, institutions can significantly improve efficiency, strengthen credential authenticity, and foster trust in academic qualifications across global education ecosystems.

Challenges and Opportunities

The integration of blockchain technology into educational institutions presents both challenges and opportunities. Research by Turkanović et al. (2018) identifies key challenges, such as the high costs of implementation, technical complexity, and resistance from stakeholders unfamiliar with the technology. On the other hand, blockchain offers the opportunity to enhance trust and transparency in credentialing, streamline administrative processes, and reduce the risk of fraudulent diplomas. Furthermore, blockchain can facilitate lifelong learning by allowing individuals to store and share credentials earned from various institutions throughout their careers (Chen et al., 2018).

Need and Rationale for the Study: The need for this study stems from the growing demand for secure, transparent, and efficient academic records management systems. In today's increasingly globalized world, students frequently move between institutions, industries, and even countries, creating a complex landscape for credential verification. Traditional methods of managing academic records are not only slow and cumbersome but also vulnerable to fraud and data breaches. Blockchain technology offers a promising solution to these issues, but its implementation in educational institutions is still in its infancy. Many institutions remain hesitant to adopt blockchain due to concerns about regulatory compliance, cost, and the technical challenges associated with integrating new technologies into existing infrastructures. This paper aims to provide educational institutions with a comprehensive guide for adopting blockchain technology, focusing on the practical steps necessary for successful implementation. By addressing key challenges—such as ensuring data privacy, selecting appropriate blockchain platforms, and navigating regulatory frameworks—this study seeks to demonstrate how blockchain can revolutionize educational credentialing. Ultimately, the adoption of blockchain

technology can foster trust and transparency in the credentialing process, improving the overall educational experience for students, faculty, and administrators.

Theoretical Background: Epistemology and Etymology

Epistemology of Blockchain in Education

The epistemological foundation of blockchain technology in education is rooted in the concept of decentralization and distributed trust. In traditional credentialing systems, trust is centralized in the hands of educational institutions and verification agencies. Blockchain, however, shifts the trust model by distributing it across a network of nodes, creating a system where verification is based on consensus rather than authority (Tapscott & Tapscott, 2016). This shift raises important epistemological questions about the nature of knowledge in decentralized systems and the role of educational institutions in verifying and conferring knowledge.

Etymology and Evolution of Blockchain

The term "blockchain" was coined in the early 2000s as a combination of "block" and "chain," referring to the method of linking blocks of transactions or data into a continuous chain, secured by cryptographic algorithms. In the context of education, blockchain represents the next evolutionary step in academic record-keeping, building on earlier digital technologies while introducing a new paradigm of decentralized, immutable credentialing. Understanding the etymological evolution of blockchain is critical to comprehending its transformative potential in education.

Objectives of the Study

1. To explore the potential of blockchain technology in revolutionizing educational credentialing.
2. To identify the critical steps involved in the successful implementation of blockchain in academic records management.
3. To examine the challenges educational institutions face when adopting blockchain technology, including regulatory and technical hurdles.
4. To evaluate the long-term sustainability of blockchain systems in educational settings, focusing on financial planning, technical maintenance, and governance frameworks.
5. To provide recommendations for educational institutions aiming to enhance trust and transparency through blockchain credentialing.

Justification for the Objectives

1. Revolutionizing Educational Credentialing:

Blockchain technology has the potential to fundamentally change educational credentialing by offering **tamper-proof, transparent, and decentralized records**. Traditional credentialing processes frequently encounter issues like **fraudulent qualifications**, delays in verification, and inefficient record-keeping systems. Blockchain effectively addresses these problems by creating **immutable records** that can be instantly verified by employers or other institutions without intermediaries. For example, the **University of Nicosia** issues blockchain-verified diplomas that graduates can securely share. This method ensures that credentials are authentic and can be verified in real-time, offering significant advantages over traditional paper-based or centralized digital records (Tapscott & Tapscott, 2016).

In **India**, initiatives like **India Chain** have explored using blockchain to verify educational certificates and credentials. The **National Institution for Transforming India (NITI Aayog)** has taken steps

toward integrating blockchain into various governmental processes, including education. This move is aimed at creating a **secure, verifiable system for academic credentials**, ensuring that graduates can prove the authenticity of their qualifications efficiently.

2. Steps for Successful Implementation:

Implementing blockchain in education requires a carefully planned approach. Educational institutions need to start with a **readiness assessment** to ensure they have the necessary infrastructure, technological resources, and personnel. Collaboration among **key stakeholders**—such as faculty, students, and administrative staff—is essential for the adoption of blockchain technology. A good example is **MIT's Digital Diploma Initiative**, where stakeholders worked together to ensure a successful deployment of blockchain-verified credentials (Grech & Camilleri, 2017).

In India, institutions like the **Indian Institute of Technology (IIT)** Kanpur are exploring blockchain-based verification of degrees to combat fraud and reduce administrative burdens. The **University Grants Commission (UGC)** has also recommended using blockchain for degree certification to reduce fraudulence and enhance transparency in the Indian education system.

Institutions must also navigate **regulatory frameworks** like **GDPR** in Europe and **FERPA** in the United States. In India, compliance with the **Personal Data Protection Bill** is essential to ensure that blockchain-based systems meet privacy and data protection requirements. Clear **objectives** should be set, ensuring the technology enhances transparency and reduces verification time.

3. Challenges in Adoption:

Although blockchain offers several advantages, its **adoption** comes with significant challenges. Regulatory compliance is a major hurdle, particularly concerning **data privacy laws** such as GDPR in Europe and FERPA in the U.S. (Zyskind & Nathan, 2015). In India, the **Personal Data Protection Bill** presents similar challenges for educational institutions. Data privacy concerns arise because blockchain's transparent nature might conflict with expectations of data confidentiality. Another challenge is the **technical barrier**, including high initial costs and a lack of expertise in blockchain technology.

To address these issues, institutions can work with **blockchain service providers** who are experienced in managing these technical and regulatory challenges. For instance, **IIT Kanpur** has partnered with blockchain technology firms to implement blockchain-based degree verification systems. This collaboration helps overcome technical and regulatory hurdles while ensuring compliance with local laws.

4. Sustainability of Blockchain Systems:

Ensuring the **long-term sustainability** of blockchain systems in education is critical. Educational institutions must plan for **financial viability**, securing funding to maintain and update the technology over time. **Technical sustainability** is another key concern, which involves regular updates to the system and the implementation of **cybersecurity measures**. Establishing an effective **governance framework** ensures that the blockchain network evolves according to the institution's needs and remains relevant in the long term.

For example, **The Open University UK** has developed a **lifelong learning ledger** using blockchain technology, which helps ensure minimal ongoing costs while maximizing benefits for students and employers (Sharples & Domingue, 2016). In India, **Tech Mahindra** has explored similar blockchain

systems that offer **digital certificates** for students, reducing the burden on institutions and promoting long-term sustainability by integrating blockchain into existing academic frameworks.

By addressing these concerns and taking proactive steps to ensure sustainability, educational institutions—both globally and in India—can ensure that blockchain remains a valuable tool for academic credentialing. This technology provides a **secure, verifiable, and efficient** method for managing educational records, benefitting all stakeholders involved.

Conclusion

Blockchain technology holds immense potential to revolutionize educational credentialing, offering unprecedented levels of trust, transparency, and efficiency in managing academic records. By decentralizing the credentialing process and creating immutable, verifiable records, blockchain addresses many of the issues inherent in traditional systems, such as credential fraud, administrative delays, and the reliance on intermediaries for verification.

However, the successful implementation of blockchain in educational institutions requires careful planning and consideration of various factors, including regulatory compliance, stakeholder engagement, and technical challenges. Educational institutions must also develop strategies for the long-term sustainability of blockchain systems, focusing on financial planning, technical maintenance, and governance frameworks.

Ultimately, blockchain technology offers significant benefits for all stakeholders in the education ecosystem. By fostering trust and transparency in credentialing processes, blockchain has the potential to enhance the educational experience for students, faculty, and administrators alike, paving the way for more secure and verifiable academic record management.

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A STUDY THE IMPACT OF EMERGING TECHNOLOGY ON ACADEMIC ACHIEVEMENT OF STUDENTS IN KARNATAKA UNIVERSITY DHARWAD

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Abstract

The main aim of this study is to find out how technologies influence the academic performance of students in Karnataka University. The study used ex post facto research design using quantitative method for data collection. Findings from the analyzed data showed that emerging technologies are available for use in various departments of the university. For example, mobile phones (93.8%), internet (88.8%), laptops/desktops (86.8%), projectors (82.1%), electronic books (68.1%), tablets (62.2%) and online courses (50.4%) accounted for more than half of the respondents. Available and accessible to more people. Mobile phones, laptops/desktops, intelligent personal assistants (IPAs), projectors, e-books, internet and e-learning lab equipment are evenly distributed across departments and the rest are statistically not evenly distributed. In addition, the study found that there is a negative relationship between the extent to which respondents use emerging technologies and their academic performance. However, Internet use recorded a statistically significant association with a p-value of 0.040.

Keywords: *Emerging technologies, academic achievement, education, distractor*

Introduction

All over the world, education is considered the key to development. There is no doubt that education has evolved over the years. Along with this, students are using all kinds of technologies to facilitate the acquisition of knowledge. Prasad (2016) pointed out that the impact of emerging technology can be seen in almost all developed countries. There is a growing consensus that developing countries are feeling the impact of emerging technologies on every aspect of their lives.

As humans continue to develop creative ways of doing things, so do educational principles. Thus, over the centuries, there has been constant change in teaching and learning methods. Educational technology has changed the face of education over the years.

According to Ouyang and Stanley (2014), educational technology has evolved rapidly over the past 50 years. From a general perspective, it is common to say that every teaching and learning activity is influenced by the technology available at a particular time.

In the past, most classroom teachers were limited to few resources or technology, forcing them to adopt a teacher-centered (chalk and talk) approach.

Thus, teachers typically do most of the talking while students watch and passively listen to the information being delivered (wanger, van den Akker and de Fetter, 2007).

wanger et al. (2007) stated that this type of teaching is often dominated by a lot of notes copying and no hands-on activities. Emerging technology is usually computers and related technological devices introduced in the educational arena. In general, it should be noted that the introduction of computers and other Information and Communication Technology (ICT) tools into the educational sector has resulted in some degree of variation in the teaching and learning process.

Statement of the Problem: In the teaching and learning process, technology is at the center of delivering information to learners. The integration of emerging technology into the learning process is to help learners use available technology to improve their academic performance. There is no consistent conclusion about the types and combinations of emerging technologies that lead to higher educational achievement. In the context of higher education, some students are still reluctant to use technologies for learning as they need it in online classes. However, private university students face academic difficulties and may eventually drop out if no intervention is organized for them. This indicates that higher education students are not using emerging technologies to supplement their learning. Moreover, students of Karnataka University are also facing similar challenges. In the light of this problem the study tried to reveal the role of emerging technology on academic achievement of students in Karnataka University.

Objectives of the Study

The study aimed at achieving the following objectives:

1. To determine the differences in the types of emerging technologies used by students across departments for academic work at the Karnataka University.

2. To determine the extent to which emerging technologies influence the academic performance of students in the Karnataka University.

Hypotheses of the Study

The following hypotheses were tested at a significance level of 0.05:

1. There is no statistically significant relationship between how often students use emerging technologies and their academic performance.

Significance of the Study

This study helps to bridge the gap in the use of technologies for educational purposes in the context of students in Karnataka University. The use of emerging technologies seems to be less in the central region where internet connectivity is low.

Therefore, this study presents new and emerging technologies that have emerged over the years and found their use in education. Additionally, university lecturers may find the recommendations useful as the study raises awareness in the use of emerging technology to support education. This study gives students confidence to use emerging technologies for their academic work.

Conceptual Framework

Figure 1. Diagrammatically depicts how the distractors affect the teaching and learning processes leading to achieving academic performance. The conceptual framework describes intervening variables that are likely to contribute or hinder academic performance.
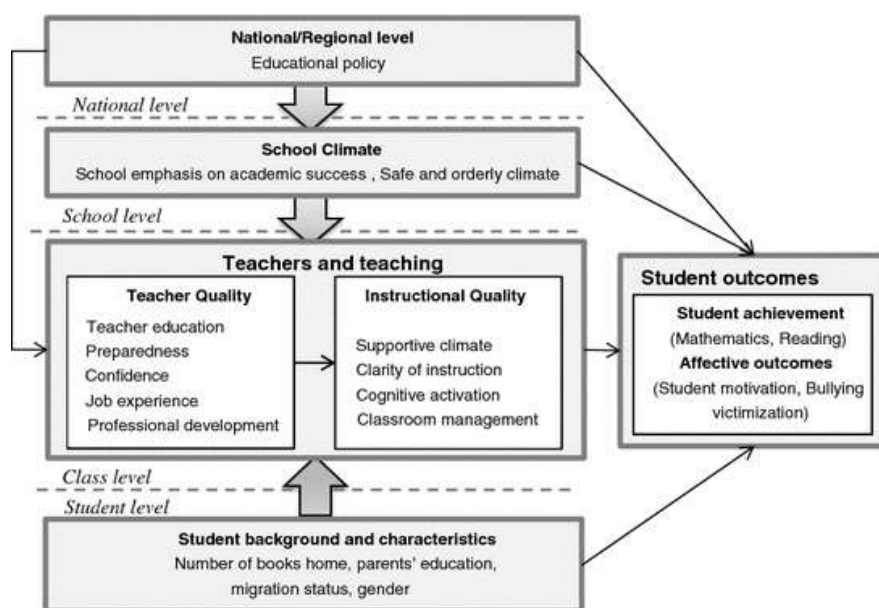
Figure 1. Conceptual framework

The main focus of Figure 1 is to identify variables that influence the teaching and learning processes. These factors are termed "distractors" because they interfere the learning activities. The researchers examined pedagogical approaches and compared traditional learning style with the emerging learning style adopted by learners.

framework is to make one understand how the learning contexts influence the choice of pedagogies. The pedagogies use in arriving at any educational goals can either be conventional (traditional) teacher-centered methods or the learner centered methods via emerging technologies. That is, the conventional method used in achieving educational goals is seen by the researchers as mainly carried out through the teacher-centered approach with an emphasis on quizzes, assignments and examinations as the main methods of evaluation. These are seen as an individual based since most of these evaluation methods are limited to each individual student.

On the other hand, with the emerging technologies, educational goals are achieved by using the learner-centered approach or the constructivists approach with the evaluation methods being mainly quizzes, projects, and examinations. Most of these evaluations are somehow similar and also, these processes are not static but relative. This means they can change depending on the context in which they are being used.

Methodology: The research design that guided this study was ex post facto. According to Silva (2012) this design is a category of research design in which "the investigation begins after the fact has occurred without intervention by the researcher" (p2). It begins with the observation and examination of naturally occurring facts, the researcher cannot intervene but can only explore the reasons behind the evidence selected for analysis. An ex post facto design is relevant to this study because the impact of emerging technologies on student academic success has received attention in the literature. A quantitative method of data collection was used to collect the data. These students were selected using stratified and cross-sectional sampling techniques based on representativeness of the population as suggested by Krejcie and Morgan (1970). Additionally, to ensure validity and reliability during the pilot study, for data

analysis, multiple response was used to obtain percentages and frequencies on availability of emerging technologies to students. Spearman rank correlation coefficient (ρ) was used for research hypothesis.

Results and Discussion

Availability of Emerging Technologies across Departments

Information obtained on the availability of emerging technologies in education is used to test for research Hypothesis 1. This information was obtained from section B of the research questionnaire used. The available technologies in all departments are tabulated in Table 1.

Table 1
Available Emerging Technologies in Departments (N = 357)

Items	N	Case Percent
Mobile phone (Smartphones)	335	93.8%
The internet	317	88.8%
Laptops and Desktops	310	86.8%
Projectors	293	82.1%
Electronic books	243	68.1%
Tablets (Android, iPads)	222	62.2%
Free online courses/learning platforms	180	50.4%
IPAs	73	20.4%
Cloud computing	73	20.4%
Projectors and laptops	42	11.8%
E-learning lab equipment	25	7.0%
Calculator	16	4.5%

Source: Field survey, Ayite and Nyagorme (2022)

At a glance, it can be seen that some technological tools recorded higher values than others. From Table 1, it is indicated that mobile phones (smartphones) are the commonest devices among students; this was revealed by 335 (93.8%) out of 357 respondents. The internet which can be easily accessed with the phone, laptops and desktops, and projectors were indicated by 317 (88.8%), 310 (86.8%), and 293 (82.1%) to be readily available for use respectively. Also, electronic books (e-books), tablets, and free online courses/learning platforms were shown by 243 (68.1%), 222 (62.2%) and 180 (50.4%) to be available respectively.

These emerging technological resources were indicated by more than half of the respondents. From other researches, emerging technologies are common in developing countries.

This is not surprising since according to records, 75% of those who subscribed to mobile devices are in developing countries (Parsons, 2014). From these results, one could say that there are limitations in the use of the resources available at the disposal of teachers and students. Considering the availability of mobile phones, laptops/desktops and cloud computing, only few students indicated that these devices are available.

Influence of the Extent of Use of Emerging Technologies on Students Academic success.

H02: There is no statistically significant relationship between how often students use emerging technologies and their academic performance.

This hypothesis was tested using the Spearman Ranked Correlation Coefficient (ρ). This statistical tool was used because the variables involved are ranked and continuous. Table 3 presents the results obtained from the analysis.

Table 3

Correlation on the Extent of Use of Emerging Technologies and Academic Performance

Items	P	Sig.(2-tailed)
I use services provided by messaging apps such as WhatsApp to get relevant academic information	0.006	0.904
I participate in my class online group discussions	0.038	0.471
I read e-books with emerging technological tools to get more understanding of concepts	0.081	0.127
I research, type, complete and submit my assignments and projects using emerging technological tools	0.067	0.204
I watch tutorials and videos on difficult concepts	-0.044	0.405
I use emerging technological tools to access information on the internet	0.109	0.040
Emerging technological tools allow me to use multimedia resources when learning	0.082	0.121
I usually compare lecturer's lessons to online information	0.006	0.904
I take online courses easily with the aid of technological tools	0.045	0.401
I watch educational movies and play educational games more than I learn with emerging technologies	0.028	0.597
I use online cloud accounts to back up my educational documents	-0.049	0.352

Source: Field survey, Ayite and Nyagorme (2022)

When the items presented in Table 3 were correlated against academic performance, only weak relationships were obtained and only one of them is statistically significant. The extent to which respondents use services provided by messaging apps such as WhatsApp to get relevant academic information recorded a correlation coefficient $\rho = 0.006$ and a significant value, sig. = 0.904. This implies that there is a weak positive relationship between the two variables, but the relationship is not significant to conclude that there is an established relation between the two variables. Similar situations were obtained for participating in class online group discussions, $\rho = 0.038$, sig. = 0.471; reading e-books, $\rho = 0.081$, sig. = 0.127; doing assignments with the help of emerging technological tools, $\rho = 0.067$, sig. = 0.204 among others. Moreover, a weak negative relationship was obtained on the extent to which some of the variables were used.

The variables that correlated negatively against academic performance include watching tutorials and videos on difficult concepts, $\rho = - 0.044$, sig. 0.405; watching educational movies and playing educational games more than learning with emerging technologies, $\rho = -0.028$, sig. = 0.597; and using online cloud accounts to backup educational documents, $\rho = -0.049$, sig. = 0.352. On the other hand, for the item "I use emerging technological tools to access information on the internet," $\rho = 0.109$ and a sig. = 0.040 was obtained. This implies that there is a statistically significant relationship between the extent of use of emerging technology to access information on the internet.

Contribution to Literature:

Findings-1.: On the other hand, it was found that tables, free online courses, cloud computing, projectors and laptops, and calculators differ from departments to departments. Some departments possess more of these devices than others. Even though projectors were noted to be evenly distributed

across departments, their uses in the various departments differ significantly as the results obtained against them are statistically significant. Meanwhile, these devices recorded both weak negative and weak positive relationships across departments.

Finding-2.: Again, the study found that there are weak relationships on the extent to which respondents use emerging technologies and their academic performance. Thus, there are positive and negative relationships between the extent to which respondents use emerging technologies and their academic performance. Meanwhile, the extent to which emerging technologies are used to find information on the internet was statistically significant with a p-value of 0.040.

Conclusion and Suggestions: It is evident to conclude that, the presence or availability of emerging technologies in the various departments does not automatically suggest that they will be used for learning by students. Learners must make conscious effort to integrate the emerging resources available into their learning styles if only they want to benefit from the advantages these resources present. Once more, how often students use emerging resources available to them is not sufficient to tag them as agents of academic boosters. Emerging resources serve different purposes; therefore, if students use them for playing games, or watching movies among others, performance will go down instead of improving. The use of emerging technologies is not a green card to academic excellence but how effective learners use it to learn. Based on the findings of the study, there is a need to educate students on effective use of emerging technologies to solve academic problems. According to the information obtained from the study, most students are of the view that learning the traditional way benefits them more than when they use emerging technologies in learning.

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MOBILE LEARNING –A MODERN TECHNOLOGY IN EDUCATION

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Abstract

E-Learning and Mobile Learning (M Learning) serve distinct purposes in the realm of education and training. While e-Learning encompasses a broad spectrum of online learning conducted on various devices, M-Learning specifically tailors content delivery to mobile devices, emphasizing accessibility and flexibility. Mobile learning (m-learning) has become a quite significant factor in higher education. Central to mobile learning is its emphasis on the learner's mobility, providing them the freedom to decide when and where they engage with educational materials. As these devices are highly personalized and collaborative communication tools, they provide the institutions of tertiary education with flexible tools for complementing the existing technologies and extending the learning beyond the classrooms and homes from remote places like train or bus stations where students do not have any access to computers. This study focuses on best practices that show the value of these technologies by looking at different evaluation measures, like academic performance and accessibility. Mobile Apps for Teaching & Learning provides flexibility of usage, remote learning, high completion rates and utilization of free time, enjoyable and informal learning, and changing educational Standards

Key Words*: Education, E-Learning, M-Learning, Mobile Apps*

Introduction: The swift progress of technology has fundamentally transformed the field of education, especially with the emergence of educational applications and mobile learning, due to this education is now more engaging and accessible thanks to these innovations, which also accommodate a variety of learning needs and styles. With the help of gamification, personalized learning experiences, and interactive content, educational apps can inspire students and improve their comprehension of difficult subjects. Mobile learning is a platform that allows students to access education at any time, from any location. Educational apps create a dynamic learning environment that promotes cooperation and independent study by combining multimedia, social interaction, and instant feedback.

What is mobile learning?

Mobile (M) learning is the ability to provide educational contents and resources on personal pocket devices such as smartphones, tablets, PDAs, i-pads, mobile phones etc., Educational content refers to digital learning resources which includes any form of content available on a personal device. M-learning is defined as learning multiple contexts, through social and content resources, using personal electronic devices. Mobile learning, often known as m-Learning, involves accessing educational content via mobile devices. Pinkwart et al. (2003) defined mobile learning as "e-learning that uses mobile devices and wireless transmission".

Mobile Application: A mobile application, most commonly referred to as an app, is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer. Mobile applications frequently serve to provide users with similar services to those accessed on PCs.

Apps are generally small, individual software units with limited function. Generally, mobile apps split into three types.

1. Native Apps: Native apps live on the device and are accessed through icons on the device home screen. Native apps are installed through an application store (such as Google Play or Apple's App Store). They are developed specifically for one platform, and can take full advantage of all the device features — they can use the camera, the GPS, the accelerometer, the compass, the list of contacts, and so on. And native apps can use the device's notification system and can work offline.

2. **Mobile Web Apps**: Web apps are not real applications; they are really websites that, in many ways, look and feel like native applications. They are run by a browser and typically written in HTML5. Users first access them as they would access any web page: they navigate to a special URL and then have the option of "installing" them on their home screen by creating a bookmark to that page. Web apps became really popular when HTML5 came around and people realized that they can obtain native-like functionality in the browser.

3. **Hybrid apps:** Hybrid apps are part native apps, part web apps. (Because of that, many people incorrectly call them "web apps"). Like native apps, they live in an app store and can take advantage of the many device features available. Like web apps, they rely on HTML being rendered in a browser, with the caveat that the browser is embedded within the app.

1. **Flexibility of Usage**: According to a research survey, people spend 35 hours a month on average on mobile apps. They have become part and parcel of people's lives because of the flexibility and ease of looking up information that they offer. The power of mobile apps can be leveraged to offer training to learners even when they are not connected to internet.

2. **High Completion Rates**: The anytime, anywhere flexibility that mobile learning technology and mobile apps offer help learners take the training when they "want to" rather than "have to"; thereby resulting in higher completion rates.

3. **Remote Learning**: Teaching away from the classroom not only helps students to progress faster, but also improve their ability to use technology. Mobile apps can be used anywhere and anytime.

4. **Utilization of Free Time**: College students always have a lot of free time, which get wasted in useless activities. With the help of e-Learning mobile apps learners can use their free hours to learn something productive.

5. **Enjoyable and Informal Learning**: Students are fed up of boring homework routines. The classroom lectures are quite monotonous. The entertaining graphics and attractive illustrations are way better than regular study patterns. The informal feel of learning apps helps learners towards enhanced learning outcomes.

6. **Changing Educational Standards**: The future of education belongs to technology. The content not only is predominant, but they also need to suit the learner.

Mobile Apps for Education:

The mobile application has wide uses for its vast functioning area like calling, messaging, browsing, chatting, social network communication, audio, video, game etc. In the education context, mobile apps can be used for the following categorical ways in to the classroom curriculum transactions

Mobile Apps for managing the classrooms:

The following are few of the mobile apps for organize the classroom transactions

1**. ClassDojo**: It is a virtual classroom environment. It allows teachers, students and parents to interact with one another. Teachers can use the platform to send feedback to their students and send alters to parents about their children grade. The best part of theplatform is that it's free for everybody. it's a way to help keep everybody communication with one another.

2. **Edmodo:** Edmodo is another virtual classroom app but this one goes the whole nine yards. Using it, we can create a virtual classroom where students can post and turn in assignments, collaborate with teachers, track progress, and everyone can upload files, photos and videos. There is also a built in grade book. There are also features to help parents, teachers, and students communicate better.

3. **Google Classroom**: This is another app version of the G Suite for education which is generally used by the educational institutions for the purpose of distributing and grading the assignments of the students. This Classroom app is used by the teachers for storing the class materials in G drive so that the students can have an easy access to the materials in case of urgent requirements. The teachers also use this app for making certain announcements and debates.

Mobile Apps for Communication

1. **Remind: T**his app is used by the teachers for the purpose of communicating with the parents and students outside of the classroom. This app can be used for making group chats, class announcements and for contacting an individual privately.

2. **Whatsapp:** The enormously popular WhatsApp is a mobile text messaging app designed for smartphone users and tablets that let us send text messages and make calls over the internet. The teacher can use the whatsapp group or broadcasting features to communicate with their students.

3. **Viber**: It is another free messaging app that works between phones, tablets, and computers. Anyone and everyone with the Viber app, regardless of their location, can text and call each other for free.

4. **Telegram:** Telegram is a cloud-based messaging service that promises fast and secure messages. It's accessible from all of our devices at the same time and supports some killer features.

Mobile Apps for Collaboration

Collaboration in the classroom helps students process and deepen knowledge. Students also develop important real-world skills like problem-solving, communication, teamwork, and leadership.

1. **Dropbox**: This application is terrific in nature as this allows the teachers to upload the presentation photos, videos, assignments and the students can have an easy access to the materials in the classroom or at their homes. With the help of this app, the teachers can edit as well as create Microsoft Office files in their smart phones and the file links can be shared with the students without flooding their inbox with massive files.

2.**Padlet**: Essentially a virtual bulletin board, Padlet is perfect for collaborative discussions. Teachers or students start by posing an open-ended question. Students respond with words, images, audio, or video. All responses appear on the original "wall" in real time, and students can comment on one another's posts.

Mobile Apps for Creativity

1. **Evernote**: This immensely popular note-taking app is a hot favorite among students and teachers. It gives them the option to jot down their ideas and keep a record of important information for later use. Used creatively, this can be a fun platform for thought-mapping and help students with their assignments, theses and dissertations.

2. **Mindmeister:** This app makes it easy to map out the relationships between ideas. For complex group projects, it can also provide a way to quickly visualize and create a project outline, together.

Mobile Apps to enhance teacher's professional growth:

1. **EdX - Online Courses**: EdX offers courses from world leading universities and colleges. 'Learn from the experts at Harvard University, MIT, UC Berkeley, Microsoft, Linux and more.

2. **Coursera: '**Learn on the go with the free Coursera App for Android. Access more than 1,000 courses and Specializations developed by 140+ of the best colleges and universities in the world, and advance our career or continue our education by mastering subjects.

3. **Udacity- L**earn Programming: 'Udacity courses are taught by industry experts from Facebook, Google, Cloudera and MongoDB. Our classes range from the very basics of programming, to more advanced courses that help us make sense of data.

Mobile apps for Formative Assessment Apps:

- Kahoot: 'Kahoot! Is a free game-based learning platform that makes learning awesome. The best way to play Kahoot! Is in a group, like our classroom. Questions appear on a shared screen and students answer on their own device.'

- Socrative: 'Engage, assess and personalize our class with Socrative! Educators can initiate formative assessments through quizzes, quick question polls, exit tickets and space races all with their Socrative Teacher app.

- Socrative will instantly grade, aggregate and provide visuals of results to help us identify opportunities for further instruction.'

- Zoho Forms: 'Zoho Forms is a free online form builder that lets teacher create mobile-ready forms. Teacher can create customizable mobile forms, configure email notifications, and collaborate with our team. It's an easy-to-use data collection tool that helps us gather and manage data from anywhere, even offline.'

- Nearpod: 'The Nearpod platform enables teachers to use their tablets/Google Chromebooks to manage content on students' mobile devices. It seamlessly combines interactive presentation, collaboration, and real-time assessment tools into one integrated solution.'

Factors influencing M-Learning in Education: There are considerable numbers of factors that motivate learners and educators to use mobile applications in higher education. To successfully adopt M- learning, attention must be given to these influential factors. The mobile devices are utilized as the teaching and learning tools. The influential factors are classified into three main categories. The features of the devices, user's expectations and pedagogical advantage.

Devices: Features of the devices were further subcategorized into three aspects, namely: usability, functional and Privacy

• Usability: From the usability aspect, M- learning tools are small, light, and portable. These features make the learners feel at ease as learning is no longer constraints to the classroom with bulky backpacks containing piles of books and other learning materials. Such freedom makes the process of transmitting knowledge becomes flexible and can be carried out anytime and anywhere.

• Functional: Functionally, the devices can provide instant and spontaneous. There are times when learners really need to get certain information fast. The devices will help the learners to quickly search

such information. M-learning is a learning model that allows the learners to gain learning materials anywhere and anytime.

• Privacy: In comparing mobile devices with other computing devices (such as laptop and PC), it offers the learners a sense of privacy. Mobile applications provide the private virtual world to the learners that make them feel safe and motivated. Having a sense of privacy will provide many reasons for learners to interact with thedevice. The learners can access information and download independently from other learners.

User's Expectations: The learners are more likely to attend to learning experiences if they are encouraged to take a more active role in their learning. M- learning opens up the opportunity for the learners to be at the center of the learning process, play an active role starting from determining their goal until the evaluation stage.

Pedagogical Advantages:

Some of the pedagogical advantages in M-Learning are:

• Flexible learning: M-learning opens up more opportunities for learning to take place regardless of place and time. The learners have the freedom to exist in different location than the teachers, to study at their own pace and time provided that they have the hardware and network infrastructure

• Collaborative learning: Social inclusion is the key to collaborative learning. The learners work together towards one common goal. Because of their accessibility, mobile devices support inclusion and allow for more opportunities for participation, and as a result, learning becomes more successful.

• Blended learning: Blended learning which combines classroom instructions with M- learning can enhance and maximize the face-to-face and online methods . The learners can carry out their assignments and projects using m-devices after a class session with their instructor.

• Interactive learning: M-technologies also support interactive learning environment. The m- devices function as the interactive agents that allow varying levels of interactivity and engagement with the technology, thus enable the process of coming to know happens which indicates that the learning is taking place, discover and work with content that they determine to be necessary to solve the problem given by the teacher.

Conclusion: M-Learning became an important instrument in the new Higher Educational Environment in the digital age which creates student-centered learning and educational practice, offering new more flexible learning methods. It enables connections and collaborations between individual participants, and through their role as always-on, always available, flexible personal communication devices. The focus on real problems of education and the uses of information and computer technology in the learning process is one of the most important factors in higher education.

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EDUCATIONAL POLICIES FOR INDIA

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Abstract

Globally, governments give education policy a lot of attention. Global pressure is putting more and more emphasis on how educational policies are performing and how they affect both social and economic development. Nonetheless, there is frequently a dearth of knowledge regarding the creation of educational policies and their definitions. An important historical development for the creation of Indian education policy was the introduction of western education. Prior to the development of contemporary education, only a very tiny percentage of people had access to learning possibilities. The Indian government created the National Policy on Education to encourage and oversee education in the country. India's program encompasses education from elementary school to university level in both rural and urban areas. Prime Ministers Indira Gandhi, Rajiv Gandhi and Narendra Modi issued the first, second and third NPEs on behalf of the Indian government, respectively, in 1968, 1986, and 2020.

Key Words: Education, Policy, Learning, NPE, Development, Rural, Urban

Introduction: This script makes an effort to analyze the nature of education policies, their fundamental components, and the goals they are meant to achieve. The guidelines and precepts that control how educational systems function are referred to as education policies. The module also seeks to answer issues regarding the goals of education, tactics adopted for reaching these goals and for identifying instruments for analyzing their impact. India boasts the largest school education system globally, serving more than 260 million youth annually. Numerous initiatives have been launched to increase access to high-quality education, especially for those who are economically or socially disadvantaged. These initiatives are jointly supervised at the federal and state levels. There has been a noticeable attempt made by the government sector to provide parents and children with what they most need and need—a high-quality education that would improve their chances in life—despite the fierce competition from private schools. India is home to the largest and most complicated education system in the world, with over 260 million enrolled students, over 8.7 million primary and secondary instructors, and over 1.5 million schools.

The Secondary Education Commission's recommendations (1952–1953): The Indian government appointed the Mudaliar Commission, also known as the Secondary Education Commission, in accordance with a resolution to improve the country's current educational system. This commission was chaired by Dr. A. LakshmanswamiMudaliar, vice-chancellor of Madras University. The commission has observed, "We have to bear in mind the principle that secondary education is a complete unit by itself and not merely a preparatory stage, that at the end of this period, the student should be in a position, if he wishes, to enter on the responsibilities of life and take up some useful vocations. The age at which the child is to begin his secondary education and the age up to which it should be continued is therefore, a matter of considerable importance. It is now generally recognized that the period of secondary education covers the age-group of about to 17 years. Properly planned education, covering about 7 years should enable the school to give a thorough training in the courses of study taken by the student and

also help him/her to attain a reasonable degree of maturity in knowledge, understanding and judgement which would stand him/her I rood stead in life."

Kothari Secondary Education Commission: The secondary education commission established by Kothari acknowledged secondary education as a crucial tool for fostering social change. In order to support its appropriate growth, it advised making sure the secondary stage has the necessary facilities. The Kothari Commission on Secondary Education suggested expanding secondary technical and vocational education institutions. It suggested making sure there were resources available to support career opportunities through vocational education. For secondary technical education to be effective, the connection is crucial. Vocational education in agriculture, trade and commerce, industry, health, home management, crafts, etc. was suggested by the commission. The commission acknowledged the significance of mass education for fostering production in industry, agriculture, and other fields as well as for the smooth operation of democratic institutions. It suggested that educators and students get involved in planning and promoting literacy initiatives as part of national service and social programs. The National Policy on Education was created in 1968 as a result of the Kothari Commission's (1964–1966) proposals for reforming education. These suggestions focused on moral values, national integration, increased productivity, and relevance to needs. Universities were also encouraged to become more involved in achieving these goals. The Kothari Commission suggested that educational facilities be made available in rural and underdeveloped areas. The commission suggested that India implement a national education system. The goal was to prioritize girls' education to the extent necessary to advance social justice and societal change. The advancement of education among the tribal population and the lower classes was to receive special attention. It also included provisions for children with physical and mental disabilities to receive an education. The Kothari Commission suggested that educational facilities be made available in rural and underdeveloped areas. The commission suggested that India implement a national education system. The goal was to prioritize girls' education to the extent necessary to advance social justice and societal change. The advancement of education among the tribal population and the lower classes was to receive special attention. It also included provisions for children with physical and mental disabilities to receive an education.

The 1968 National Policy on Education (NPE): They included requirements for mandatory schooling up until the age of 14, increased equality of opportunity, the implementation of the (then novel) three-language formula, and enhanced teacher preparation. The Rajiv Gandhi administration unveiled a revised National Policy on Education in 1986. In particular, for Indian women, Scheduled Tribes (ST), and Scheduled Caste (SC) populations, the strategy called for "special emphasis on the removal of disparities and to equalize educational opportunity." The policy aimed for increasing scholarships, adult education, hiring more teachers from the SCs, encouraging impoverished families to bring their kids to school regularly, building new institutions, and offering housing and services in order to accomplish this kind of social integration. In order to strengthen primary schools across the country, the NPE started "Operation Blackboard" and advocated for a "child-centered approach" in primary education. The Indira Gandhi National Open University, established in 1985, was included to the system of open universities by the policy. In order to support social and economic development in rural India at the local level, the strategy also called for the establishment of the "rural university" model, which was based on the ideas of Mahatma Gandhi. According to education policy from 1986, education would receive 6% of GDP.

The P. V. Narasimha Rao administration changed the 1986 National Policy on Education in 1992. A new program based on his United Progressive Alliance (UPA) government's "Common Minimum Programme" was adopted by former prime minister Manmohan Singh in 2005. Under the National Policy on Education (NPE), 1986, the Programme of Action (PoA) 1992 planned to hold a common entrance exam for admission to professional and technical programs across the nation. The Government of India established a three-exam scheme (JEE and AIEEE at the national level and the State Level Engineering Entrance Examinations (SLEEE) for State Level Institutions – with an option to join AIEEE) for admission to engineering and architecture/planning programs through a resolution dated October 18, 2001. This addresses the various requirements for admission to different programs and aids in upholding professional standards. Additionally, by eliminating overlaps, this lessens the financial, mental, and physical strain that multiple entrance exams place on parents and students.

National Educational Policy 2020: A series of public consultations ensued when the then-Ministry of Education presented a Draft New Education Policy 2019 in 2019. It talks about cutting back on curricular content to improve critical thinking, essential learning, and more all-encompassing experience, discussion-, and analysis-based learning. Additionally, it discusses changing the pedagogical framework and curriculum from a 10+2 system to a 5+3+3+4 system design in an attempt to maximize student learning based on cognitive development. The last year of the graduating course now includes research methodology, and students can choose to drop it and still get their certificate or degree in accordance with that. A new National Education Policy was adopted by the cabinet on July 29, 2020, with the intention of implementing many reforms to the current Indian education system. These changes would be implemented in India through 2026.

Vision of the Policy: An education system rooted in Indian ethos that contributes directly to transforming India, that is Bharat, sustainably into an equitable and vibrant knowledge society, by providing high-quality education to all, and thereby making India a global knowledge superpower. The curriculum and pedagogy of our institutions must develop a deep sense of respect towards the fundamental duties and Constitutional values, bonding with one's country, and a conscious awareness of one's roles and responsibilities in a changing world. To instill a deep-rooted pride in being Indian, not only in thought, but also in spirit, intellect, and deeds, as well as to develop knowledge, skills, values, and dispositions that support responsible commitment to human rights, sustainable.

Salient Features of NEP 2020: Salient features of NEP 2020 as per UGC can be given below - "NEP 2020 is the first education policy of the 21st century and replaces the thirty-four year old National Policy on Education (NPE), 1986. Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, this policy is aligned to the 2030 Agenda for Sustainable Development and aims to transform India into a vibrant knowledge societyand global knowledge superpower by making both school and college education more holistic, flexible, multidisciplinary, suited to 21st century needs and aimed at bringing out the unique capabilities of each student. The policy has been formulated after a very detailed consultative process, unprecedented in depth and scale. Consultation involved over 2 lakh suggestions from 2.5 lakhs Gram Panchayats, 6600 Blocks, 6000 ULBs, 676 Districts. The MHRD had initiated a collaborative, inclusive, and highly participatory consultation process from January 2015. In May 2016, 'Committee for Evolution of the New Education Policy' under the Chairmanship of Late Shri T.S.R. Subramanian, Former Cabinet Secretary, submitted its report. Based on this, the Ministry

prepared 'Some Inputs for the Draft National Education Policy, 2016'. In June 2017 a 'Committee for the Draft National Education Policy' was constituted under the Chairmanship of eminent scientist Padma Vibhushan, Dr. K. Kasturirangan, which submitted the Draft National Education Policy, 2019 to the Hon'ble Human Resource Development Minister on 31st May, 2019. The Draft National Education Policy 2019 was uploaded on MHRD's website and at 'MyGov Innovate' portal eliciting views/suggestions/comments of stakeholders, including public".

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ARTIFICIAL INTELLIGENCE: PERCEPTION OF STUDENT TEACHERS

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Abstract

The research study was undertaken to investigate the perception of Pre-service teachers towards Artificial intelligence. The sample of 100 Pre-service teachers (B. Ed Student Teachers) from Shimoga city was selected by adopting Stratified random sampling technique based on the independent variables namely Gender and Stream. Pre-Service teachers Perception towards Artificial intelligence was accessed with the help of the Perception towards Artificial intelligence Scale constructed by the investigator Dr. Manju N. D. Specific objectives formulated were: 1. To assess the level of perception of Pre-service teachers towards Artificial Intelligence. 2. To find whether there is any significant difference between male and female teachers with respect to their perception towards Artificial Intelligence. 3. To find whether there is any significant difference between Arts and Science Stream Pre-service teachers with respect to their perception towards Artificial intelligence. Descriptive survey method was adopted for the study. The data obtained from the survey was analyzed by using Percentage analysis and t-test. Findings of the study were: 1. More than half of the pre-service teachers in Shimoga city i.e., 60.0% of them possess an Average perception towards Artificial Intelligence and 35% possess highly favourable perception in Artificial Intelligence, and only 5% of the pre-service teachers possess less perception towards Artificial intelligence. 2. There is no significant difference between male and female pre-service teachers in their perception towards Artificial Intelligence.3. There is no significant difference between Arts and Science Pre-serviced teachers in their perception towards Artificial Intelligence.

Introduction:

Artificial Intelligence (AI) is changing the way we interact with technology and live our lives. It has the potential to transform education, especially teacher education. The usage of Artificial intelligence is growing at an unprecedented rate & it is rapidly changing the aspects of human life. In recent years the use of Artificial Intelligence (AI) & Learning Analytics (LA) have effectively been introduced in the field of education. Education includes many aspects of teaching & learning and it involves both school education and higher education.

Teacher training is an important part of our education because that is what the future looks like.

The National Council for Teacher Education (NCTE) defines teacher education as a programme of education, research and training of teachers to teach students from pre-school to higher education. The main goal of teacher education is to develop the knowledge and skills of future teachers so that they can meet the teaching needs and prepare to meet future needs. It is important to understand that artificial intelligence can support teachers by providing educational applications, just as this technology has revolutionized other professions. The main goal of artificial intelligence is to perform complex tasks that usually require human intelligence, thereby reducing human beings.

Definitions of AI:

Artificial Intelligence (AI) refers to the ability of digital computers or machines to perform intelligent tasks.

The term is frequently applied to modern systems, endowed with the intellectual characteristics of humans and the ways people use their brains to perceive, learn, reason and decide action.

According to Dorfler (2022) Artificial Intelligence can be defined as machines that can perform the tasks that humans carry out through their thinking.

NEP 2020 also highlighted the role of technology in the advancement of the nation and recommended the integration of AI into the education system of India.

Historical perspectives of AI: The term Artificial Intelligence was first coined and used by John McCarthy in the year 1956 during a two month long workshop held at Dartmouth College, US. (Zawacki-Richter et al., 2019) But even before this, evidences suggest that artificial intelligence had been talked about. M. A. Turing in his paper Computing Machinery & Intelligence (1950) wrote, "We may hope that machines will eventually compete with men in all purely intellectual fields". (Turing) His prediction seems correct as we come across ChatGPT in the year 2022. Artificial Intelligence (AI) is also called as the machine intelligence. A machine (computer system) mimics the human intelligence. Knowingly or unknowingly artificial intelligence has become an integral part of our lives. (Arya & Yadav, 2021) It is widely being used during online shopping, browsing internet, travelling using GPS. Efforts are continuously being made by academicians to integrate AI in education for carrying out task automation, personalized learning, providing universal access, smart content creation, teaching the teacher, identifying classroom weakness, 24/7 assistance.

The Role of Artificial Intelligence in Teacher Education: The integration of AI in education has the potential to transform the way teachers are trained and to enhance the quality of teacher education. India has been at the forefront of the adoption of AI in education but we need to identify the challenges and opportunities it presents. The rate of adoption of AI in education is comparatively low as compared to other fields, such as medicine, industry, and finance. The following are the significant roles of artificial intelligence towards teacher education.

1. **Improving the Quality of Teacher Education:** AI can play a crucial role in improving the quality of teacher education. Artificial intelligence is becoming an integral part of smart ICT based apps targeted for digital learning in India. One of the significant challenges in teacher education is ensuring that teachers have a strong foundation in the subject matter they teach. AI can provide teachers with access to high quality educational resources and learning materials that are tailored to their individual needs. AI can also help teachers identify knowledge gaps and provide feedback on areas where they need improvement. Teachers can seek the help of AI to improve their teaching skills. Below is a comparison between the search result for the statement "ways to improve teaching skills" on both Google and open AI ChatGPT.

2. **Enhancing Teachers' Skills:** AI can also enhance teachers' skills by providing them with access to a range of tools and resources that can help them become better educators. For example, AI-powered assessment tools can provide teachers with real-time feedback on student performance, enabling them to adjust their teaching strategies to better meet the needs of their students. AI can also help teachers to personalize learning, creating lessons that are tailored to the individual needs of their students. Educational Institutions like the Kendriya Vidyalayas that follow CBSE syllabus have already introduced AI to their students. Humanoid robots are assisting teachers in the classrooms at Indus International School, Hyderabad.(Nataraj, 2022) Many schools that follow IB curriculum have already taken the initiative and introduced AI as a part of the newly introduced robotics subject.

3. **Facilitating Personalized Learning:** AI can facilitate personalized learning by providing teachers with access to a range of tools and resources that can help them create personalized

learning experiences for their students.AI has the potential to enrich student's experience (Qadir, 2022). For example, AI can help teachers to identify students' learning styles, interests, and abilities and use this information to develop lessons that are tailored to each student's individual needs. AI can also help teachers to track students' progress and adjust their teaching strategies accordingly. "A personalized learning environment can analyze student performance data in real time and automatically provide customized content, learning parameters and feedback. It also allows teachers to better understand student performance and as a result, teachers can design effective learning plans for their students". (Wadhwa).

4. **Access to High-Quality Educational Resources**: One of the most significant challenges in teacher education is ensuring that teachers have a strong foundation in the subject matter they teach. AI can provide teachers with access to high-quality educational resources and learning materials that are tailored to their individual needs. For example, the Global Teaching Insights Report found that many teachers in developing countries face significant barriers in accessing high-quality educational resources. But post pandemic the scenario is rapidly changing. The 'ICUBE 2020' report by IAMAI and Kantar indicates that the usage of internet which is pre requisite of adopting artificial intelligence continues to grow in India. It is stated that the number of active internet users are expected to grow and reach 900+ Million by 2025. AI can help bridge the gap by providing teachers with access to a range of educational resources, such as online lectures, educational videos, and e-books.

5. **Identifying Knowledge Gaps:** AI can also help identify knowledge gaps and provide feedback on areas where teachers need improvement. By analyzing teacher performance data, AI systems can identify areas where teachers may need further development or support. This information can then be used to create targeted professional development programs that help address those gaps.

6. **Identifying Learning Styles:** One of the critical aspects of teacher education is to develop teachers' skills in identifying and catering to various learning styles of their students. AI can help teachers to identify students' learning styles and provide recommendations for adapting teaching methods. For example, an AI system can analyze data on how a student interacts with an online learning system to infer their learning style and recommend instructional strategies that cater to that style.

7. **Adaptive Learning:** AI systems can provide adaptive learning experiences that cater to the needs of individual learners. Adaptive learning is a teaching method that uses AI algorithms to adjust the difficulty and complexity of the learning content to match the individual's learning pace and ability. By using AI to personalize learning, teachers can help students develop more significant mastery over the subject matter and improve their learning outcomes.

8. **Continuous Professional Development:** National Educational Policy 2020 has emphasized on the professional development of teachers. AI can provide opportunities for continuous professional development for teachers in many ways. For example, AI systems can provide feedback on teacher performance, highlighting areas where they may need further development. Additionally, AI systems can provide recommendations for professional development opportunities that are tailored to the specific needs of individual teachers.

Need and Significance of the Study: Artificial Intelligence (AI) has been significantly changing the structure of every industry and exponentially increasing the availability of cutting-edge tools utilized in people's everyday lives. This state-of-the-art technology has also considerably influenced educational practices, and efforts are constantly being made to incorporate AI into teaching and learning. For several decades, educators have utilized AI techniques to advance learning management systems, assessment instruments, and other learning support tools in various subjects. Teachers play a crucial role in using AI technology in classrooms. However, integrating AI tools into education undoubtedly requires teachers to make additional efforts to adapt their teaching strategies, to use their professional judgment on how to include them in the classroom, and to assess students' knowledge as AI products become more sophisticated and easily accessible. Research on technology integration in education has shown that "technology adoption and technology use by teachers are moderated by a variety of factors, comprising external factors such as access, school support, provision of professional development, and internal factors such as teachers' attitudes, concerns, technological competence and beliefs" (Burke et al., 2018). Similarly, Ertmer et al. (2012) identified first-order barriers to technology integration, which include external factors such as training and support, and more challenging second-order barriers, which are teacher-related and include teachers' confidence, beliefs about how students learn, and the perceived usefulness of technology in the teaching and learning process. The significance of this is the recognition that the successful integration of AI in education depends not only on teachers' knowledge and skills, but also on their attitudes, acceptance, and confidence in the technology. Indeed, teachers' perceptions of AI play a crucial role in shaping their willingness to incorporate AI technologies into their teaching practices. Understanding teachers' attitudes towards AI is crucial for the future development of educational AI tools and their use in teaching and learning. The aim of this research is to explore the Pre-Service teachers' perception towards Artificial Intelligence in education, with a focus on their perceived benefits of AI and concerns about AI.

Objectives of the study

1. To assess the level of perception of Pre-service teachers towards Artificial Intelligence.
2. To find whether there is any significant difference between male and female teachers with respect to their perception towards Artificial Intelligence.
3. To find whether there is any significant difference between Arts and Science Stream Pre-service teachers with respect to their perception towards Artificial intelligence.

Hypotheses of the study:

1. There is no significant difference between male and female Pre-Service teachers with respect to their perception towards Artificial Intelligence.
2. There is no significant difference between Arts and Science Stream Pre-service teachers with respect to their perception towards Artificial Intelligence.

Methodology: The present study was taken up to investigate the perception towards Artificial Intelligence of Pre-Service teachers and to find whether there is any difference in these variables with respect to gender and stream. Descriptive survey method of study was followed.

Variables of the study:

      Dependent variable: Artificial intelligence

      Moderate variables: Gender and Stream

Sample of the study:

The study was conducted on a sample of 100 Pre-Service teachers of Shimoga city. The selection of teachers was done on the basis of stratified random sampling method.

TOOLS:

The following tools used to collect the data from the Pre-Service teachers:

➢ **"Perception towards Artificial Intelligence Scale"** constructed by Dr. Manju N. D was used. The scale contains 25 statements represent the perception of pre-service teachers towards Artificial Intelligence which represent the universe of content.

PROCEDURE FOR DATA COLLECTION:

Data for the study was collected by administering the perception towards Artificial Intelligence Scale to the selected sample by the investigator. The obtained data with respect to different back ground variables were tabulated and subjected to statistical analysis employing statistical techniques.

STATISTICAL TECHNIQUES USED FOR ANALYSIS OF DATA:

The obtained data was analyzed using Percentage Analysis and 't' test.

ANALYSIS OF THE DATA AND INTERPRETAION OF THE RESULTS:

The analysis of data interpretation and discussion of the results are presented below:

Objective 1: To assess the level of perception of Pre-service teachers towards Artificial Intelligence.

In pursuance of the objective 1 of the study the analysis is presented in table No 1.

Table No. 1: Table showing the percentage of the Pre- Service teachers with respect to their different levels of Perception towards Artificial Intelligence.

Pre-Service teachers	Level of Perception of Artificial Intelligence (in %)			Total
	Highly favourable perception towards Artificial Intelligence	Average level of perception towards Artificial Intelligence	Less perception towards Artificial Intelligence	
Frequency	35	60	5	100
Percentage	35	60	5	100

The table No.1 shows that 35 percent of the pre-service teachers have possess Highly favorable perception about Artificial Intelligence. 60 percent of the pre-service teachers possess an average level of perception towards Artificial Intelligence. There are only 5 percent of Pre-service teachers in the range of less favorable perception towards Artificial Intelligence.

Ho. 2: There is no significant difference in the perception towards Artificial Intelligence of male and female Pre-Service Teachers.

Table No. 2: Summary table of 't' test of perception towards Artificial Intelligence of male and female Pre-Service Teachers.

Gender	N	Mean	Standard Deviation	t- value	df	Significant level
Male	15	172.47	33.02	0.150	98	N S at 0.05 level
female	85	172.38	32.22			

The table 2 shows that the obtained 't' value of 0.150 is less than the table value of 1.980 at 0.05 significant level for degree of freedom 98. It is inferred that there is no significant difference in perception towards Artificial Intelligence of male and female Pre-Service Teachers. Hence the null hypothesis is accepted.

Ho.2 : There is no significant difference in the perception of Artificial Intelligence of pre-service teachers with respect to their Arts and Science Stream.

Table No. 4: Summary table of 't' test of perception towards Artificial intelligence of pre-service teachers of different Streams.

Streams	N	Mean	Standard Deviation	Standard Error of mean	t- value	df	Significant level
Arts	40	183.59	24.20	3.45	0.918	98	N S
Science	60	178.17	33.82	4.73			

The table 3 shows that the obtained 't' value of 0.918 is less than the table value of 1.980 at 0.05 significant level for df 98. It is inferred that there is no significant deference between the perception towards Artificial intelligence of Arts and Science Stream Pre-service teachers. Hence the null hypothesis is accepted.

FINDINGS OF THE STUDY:

It is found that:

1. Nearly of more than half of the pre-service teachers in Shimoga city i.e., 60.0% of them possess an Average perception towards Artificial Intelligence and 35% possess highly favorable perception in Artificial Intelligence, and only 5% of the pre-service teachers possess less perception towards Artificial intelligence.
2. There is no significant difference between male and female pre-service teachers in their perception towards Artificial Intelligence.
3. There is no significant difference between Arts and Science Pre-serviced teachers in their perception towards Artificial Intelligence.

Educational Implications:

The following educational implications could be drawn from the findings of the study:

1. Understanding teachers' attitudes towards AI is very important for the future development of educational AI tools and their use in teaching and learning process. Their perceptions should guide policymakers and technology developers to maintain transparency, ethical considerations, and to develop the AI tools to support, trusted and accepted by teachers. In the light of these findings, it is evident that the journey towards integrating AI in education is necessary and significant.
2. AI integration in the school curriculum is providing a student-centric learning approach and makes learning more joyful and on the other hand, AI also helps teachers in teaching, evaluation process and so on. With the integration of AI into the school curriculum students will be prepared for technological advancement and can cope with the changing needs of society. It is visualized that such a step would help to build a larger understanding of AI amongst the teacher and student communities.

3. Pre-service teacher's perceptions are influenced by a complex set of different personal, societal and cultural determinants, as well as ethical considerations. This means that contextual factors such as school policies, professional development opportunities, the educational ecosystem, and societal perceptions of the efficacy and trustworthiness of AI technologies are important in shaping teachers' perceptions and perspectives on AI. Therefore, the change connected to the adoption of AI in education requires more than just introducing a new digital tool into the classroom by enthusiastic individual teachers. Rather, as previous studies have shown that, the process depends on a complex relationship of various factors, such as existing teaching practices, perceptions of school authorities, and the technical infrastructure and pedagogical support available (Cukurova et al., 2023). Teachers will, therefore, be more enthusiastic about adopting AI technologies in an AI-supportive context.

Conclusion: Artificial intelligence (AI) has been increasingly used in various fields to improve efficiency and effectiveness, and education is no exception. The potential of AI in teacher education is important, but its execution requires careful consideration of ethical, technical, social, and cultural factors. Although AI has the potential to improve the quality of teacher education, develop teachers' skills, and facilitates individual learning, it also improves the concerns about data privacy, cultural acceptability and bias. To ensure that AI is used to its fullest potential in teacher education, it is essential to develop a complete framework that ensures its proper usage. The use of AI in education, specifically in teacher education, has the potential to revolutionize the way educators are trained and improve the quality of education in general. AI systems can provide personalized and adaptive learning experiences that cater to the individual needs of learners, enhancing the effectiveness of teaching methods.

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IMPACT OF MOBILE APP LEARNING AMONG SECONDARY SCHOOL STUDENTS

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Abstract

Mobile learning apps have become more common among secondary school students. Mobile App learning provides new opportunities to learn outside of the traditional classroom. As mobile technology becomes increasingly integrated into everyday life, educational apps are changing the way students study and engage with content. The questionnaire was provided to secondary school students to analyze their usage habits, experiences, and perceptions of mobile learning applications. According to the findings of the study, mobile apps help students stay engaged, learn independently, and access educational resources at any time and from any location. This article analyses how Mobile Learning apps influence students' academic achievement, motivation, and study habits .While these tools improve learning outcomes for many students, issues such as excessive screen time and disparities in accessibility persist. Overall, mobile learning apps have a good impact on secondary school education; still, careful preparation is required to ensure they are used properly in schools.

***Key Words:** Mobile Learning, Secondary school students, Mobile Usage*

Introduction: The growth of digital technology has transformed the educational scene, giving pupils access to a wide range of learning resources. Mobile learning apps, in particular, are gaining popularity because they provide flexibility, personalized content and interactive learning opportunities. For secondary school students, these apps provide as an alternative or supplement to regular classroom learning. The purpose of the study is to investigate the impact of mobile app learning on secondary school students, specifically how these tools affect academic performance, engagement, and skill development. Mobile apps for education provide interactive learning platforms that supplement traditional classroom instruction. These apps offer access to a diverse set of educational resources, such as e-books, videos, quizzes, and gamified information. Mobile learning apps enable flexible and personalized learning at any time and from any location. These apps are especially important for secondary school students who need to practice subjects like mathematics, language learning, and science on a regular basis.

Objectives

- To figure out the frequency of mobile app usage among secondary school students for educational reasons.
- To investigate the influence of mobile apps on academic performance among secondary school Students.
- To determine the effectiveness of mobile apps in increasing student engagement and motivation.
- To investigate how mobile learning apps aid in the development of fundamental skills.
- Identify the Barriers and challenges that students face when utilizing mobile apps.
- To Collect student perspectives on incorporating mobile apps into formal education

Literature Review

Jolly B. Mariacos, Marilou A. Dela Peña, conducted a study to evaluate the use and impact of mobile apps in learning. The study's main objective was to assess how mobile apps are used and what effect they have on education. A research conducted for the 2021–2022 academic year at the College of Business Administration, Baguio City. One hundred fifty (150) CBA students participated in the survey as responders. The research study used a checklist, interviews, and a mixed approach with a descriptive research design. Findings of the study were, Face book and Messenger were the mobile apps used in the College of Business Administration (CBA) for educational purposes. There is a favorable impact on learning in the (CBA) department. The study reveals that there was positive impact towards mobile app. Mobile apps has the potential to improve learning.

Lovely Joseph Pullokaran conducted a study on Impact of Mobile Apps in Education; The purpose of this study was to evaluate the effects of mobile applications in the field of education. Schools in Kerala's rural and urban areas were chosen for the study. Direct interviewing was the method employed to gather data for the analysis from the teachers, students, and parents of these chosen schools. The findings show that the use of mobile apps helps children become innovate and self-learner. Many schools are employing user-friendly apps to track kids' academic performance, attendance records, and other information that can be readily shared with parents to keep them informed about their child's progress. The findings of this study suggest that mobile applications benefit pupils. They are drawn to the mobile educational apps due to a few aspects, such as the 24/7 availability, systematic learning, and user-friendly environment. The mobile educational software for learning and other mobile apps that help student's complete academic tasks in their classrooms are supported by parents and teachers.

METHODOLOGY

This study is quantitative in nature. A questionnaire was prepared, The questionnaire was constructed with a 5-point Likert scale (S.A = Strongly Agree A-Agree, N-Neutral, D.A-Disagree, S.D-Strongly Disagree)and covered a various dimensions such as Mobile app usage, academic impact, engagement, motivation, skill development, and challenges faced by secondary school students for utilizing mobile app in learning. To know the impact of mobile app learning among secondary students, the data was collected from secondary school students. Questionnaire was distributed to the sample, Simple Random sampling method was used, 57 secondary school students were selected by random sampling method and data was gathered by using structured questionnaire.

Data Analysis

Usage of Mobile Learning apps

Sl.no.	Statements	S.A	A	N	D	S.D
1	I often use educational mobile apps for learning	34.6%	38.5%	26.9%	-	-
2	I think using mobile apps is a convenient way to learn outside the classroom.	15.40%%	38.50%	34.60%	11.50%	-
3	I think using mobile apps is a convenient way to learn outside the classroom.	15.4%	42.3%	23.1%	19.2%	-
4	I use mobile applications to learn particular courses (like science, math, and languages).	34.6%	30.8%	23.1%	11.5%	-
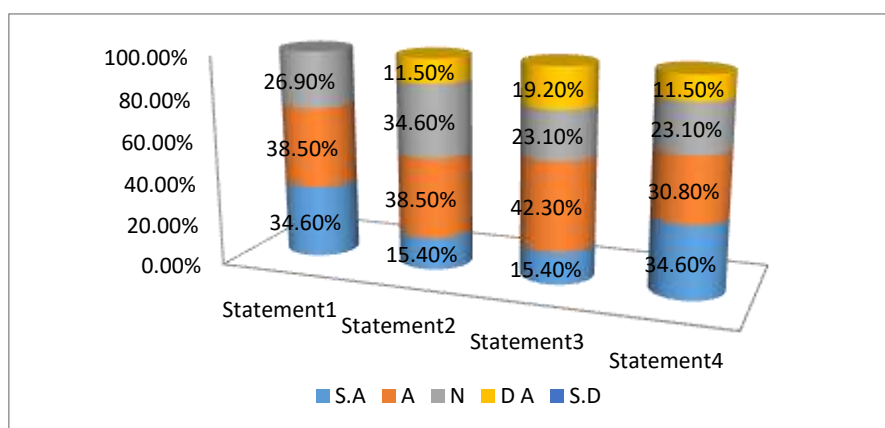
Figure 1: Usage of Mobile Learning apps

According to the research, 34.6 % of students strongly agreed and 38.5% agreed   that they often use mobile learning apps, for learning. And   15.4 % students strongly agreed and 38.5% students agreed that they use smart phones every day to comprehend academic subjects.   15.4% students strongly agreed and 42.3% agreed   that mobile app is a convenient way to learn outside the classroom. 34.6% students strongly agreed and 30.8% agreed   that they use mobile applications to learn courses like Science, Mathematics, and Languages.

Impact on Academic Performance and Learning

Sl.no.	Statements	S.A	A	N	D	S.D
5	Mobile learning apps helped me to boost my academic performance	23.1%	30.8%	23.1%	19.2%	3.8%
6	Mobile apps have made it easier for me to learn complex concepts.	36%	24%	32%	8%	-
7	Using mobile learning apps has increased my confidence to face exams and tests.	30.8%	34.6%	19.2%	15.4%	-
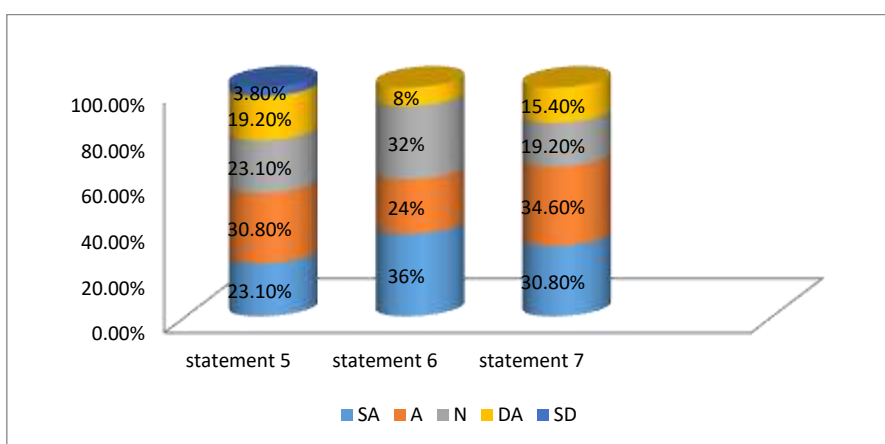
Figure 2: Impact on Academic Performance and Learning

23.1% of respondents strongly agreed and 30.8% Students agreed that Mobile learning apps helped them to boost their academic performance. 36% of students strongly agreed and 24% of the students agreed that that mobile apps improved their understanding of challenging concepts, particularly in maths and science.34.6% respondents agreed and 30.8% of the respondents strongly agreed that Mobile app learning increased their confidence to face exams confidently.

Engagement and Motivation

Sl.no.	Statements	S.A	A	N	D	S.D
8	Compared to conventional learning methods, mobile apps offer a superior learning experience	28%	16%	40%	16%	-
9	I find that studying is more enjoyable and interactive when I use mobile apps.	28%	32%	20%	20%	-
10	I think the interactive exercises and quizzes found in mobile learning apps make me more engaged while learning	28%	28%	32%	12%	-
11	My motivation to study frequently is maintained by mobile apps.	32%	44%	12%	12%	-
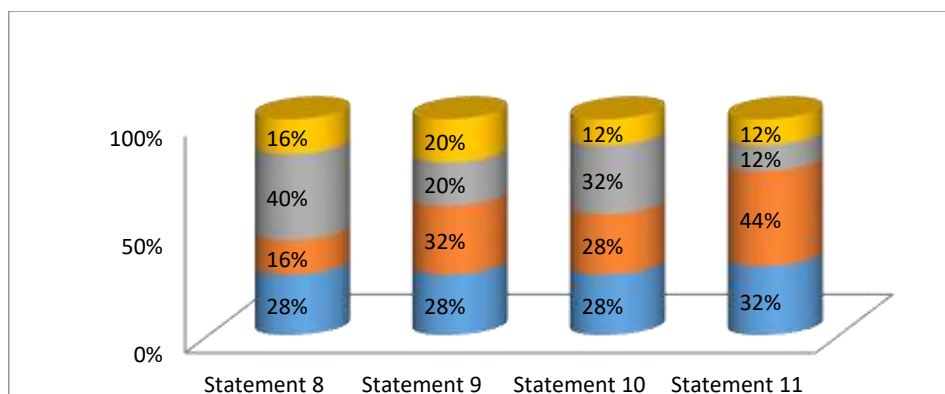
Figure 3: Engagement and Motivation

16% Students agreed and 28% of students strongly agreed that Mobile app learning is superior to conventional learning. About 32% of students agreed and 28% of students strongly agreed that mobile apps made learning more enjoyable and interactive, while 44% respondents agreed and 32% strongly agreed that apps increased their motivation to study regularly. Features like quizzes, gamification, and instant feedback were particularly highlighted as contributing factors.

Development of Skill

Sl.no.	Statements	S.A	A	N	D	S.D
12	Mobile apps have helped me to enhance the abilities like problem-solving and critical thinking	24%	52%	16%	8%	-
13	Mobile learning apps helped me better manage my time and study.	36%	16%	28%	16%	4%
14	Mobile apps have helped me improve my digital literacy skills (for example, using online tools and looking for resources etc.)	28%	40%	24%	8%	-
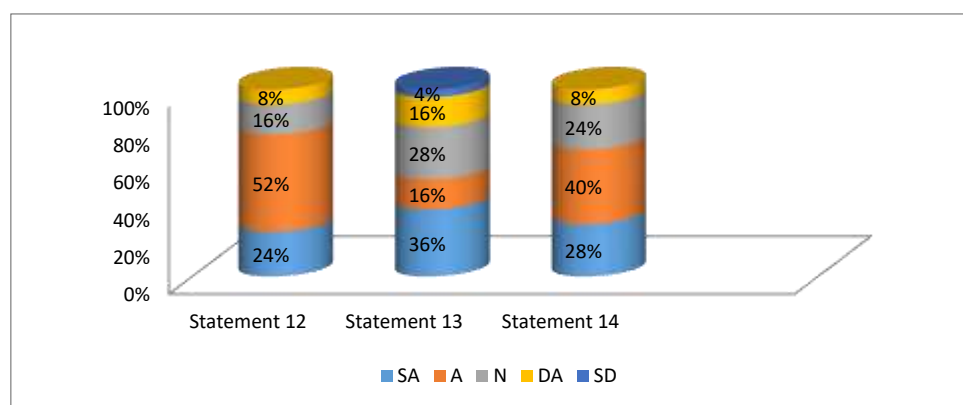
Figure 4: Development of Skill

Besides academic improvement, 52% of students agreed and 24% of students strongly agreed that mobile apps helped them to enhance the abilities like problem solving and critical thinking skills. Moreover, 36% students strongly agreed and 16% students agreed that mobile app learning helped them to enhance time management skills due to app features that allow self-paced learning and progress tracking. 40% students agreed and 28% students strongly agreed that mobile app learning improved their digital literacy skills.

Challenges and limitations

Sl.no.	Statements	S.A	A	N	D	S.D
15	I occasionally find mobile learning apps distracting Because of their non-educational material (advertising, social networking, etc)	25%	33.3%	20.8%	8.3%	12.5%
16	Poor internet connectivity makes it harder for me to access mobile learning apps.	16.7%	33.3%	33.3%	16.7%	-
17	Using a variety of mobile apps for education can occasionally feel overwhelming.	16%	40%	32%	12%	-
18	Balancing mobile learning with regular classroom learning is a challenge for me.	20%	28%	32%	16%	4%
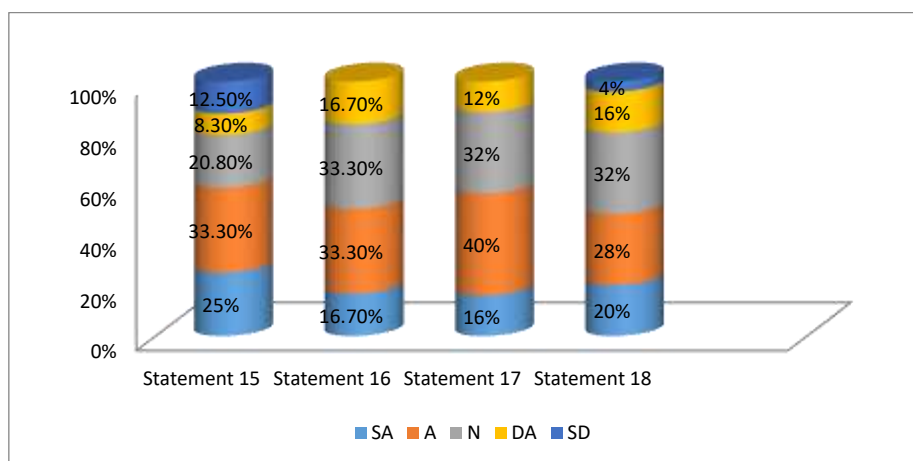
Figure 5: Challenges and limitations

Despite the benefits, 33.3% of students agreed and 25% students strongly agreed that problems such as distractions mainly from social media and marketing while using mobile apps. Furthermore, 33.3% of students agreed and 16.7% of students strongly agreed that they face difficulty using mobile learning apps due to poor internet connections, particularly in rural locations. 28% of respondents agreed and 20% students strongly agreed that balancing mobile learning with regular classroom learning is challenging for them.

Student Perceptions of incorporating mobile learning apps into the academic curriculum.

Sl.no.	Statements	S.A	A	N	D	S.D
19	I prefer to utilise mobile apps for learning more than traditional classroom instruction.	20.8%	20.8%	16.7%	41.7%	-
20.	mobile learning apps should be included in the curriculum of educational institutions.	16.7%	25%	45.8%	12.5%	-
21	Mobile apps could benefit from more localized content and resources.	20.8%	29.2%	37.5%	12.5%	-
22	I believe that mobile learning apps will play a crucial role in the education.	20%	28%	40%	12%	-
23	I would recommend mobile learning apps to my classmates to improve their learning.	24%	44%	24%	8%	-
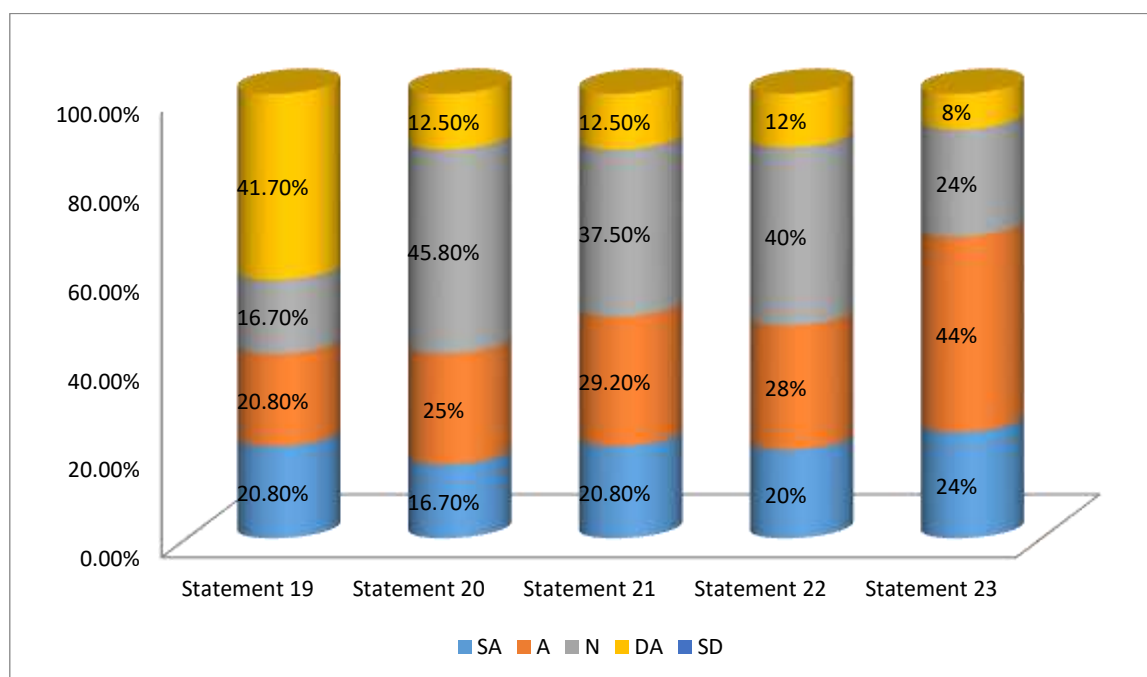
Figure 6 Perceptions of incorporating mobile learning apps into the academic curriculum.

Students were generally supportive of incorporating mobile learning apps into the academic curriculum. Around 41% stated that mobile app learning should be included in the school curriculum 24% students strongly agreed and 44% students agreed that they will recommend mobile learning app to their classmates to improve their learning.

Conclusion: The study highlights the significant Impact on mobile app learning on secondary school students, mobile apps are becoming a more and more important aspect of students' academic lives. Particularly in enhancing academic performance and motivation. These apps provide an engaging and interactive alternative to traditional learning methods and help to develop important skills such as problem-solving skill and time management. The results show that mobile learning apps have positive impact on students' academic achievement, engagement, and skill development. With their flexibility and interactive capabilities, these apps are seen by many students as a useful addition to more conventional teaching techniques, helping them better understand challenging subjects. However, the paper also identifies important obstacles or   challenges like distractions of social media and internet access limitations   such as restricted access to reliable internet, especially in rural regions, and distractions from non-educational content. These limitations indicate that, while mobile apps have the potential to improve learning outcomes, proper guidance and infrastructural upgrades are required to maximize their usefulness   in education.

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AUGMENTED REALITY PEDAGOGY - A NEW WINDOW IN SCIENCE TEACHING LEARNING

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Abstract

Augmented Reality (AR) is emerging as a transformative pedagogical tool in science education, offering immersive and interactive experiences that enhance learning outcomes. This article explores the integration of AR in science curricula, highlighting its potential to foster engagement, facilitate complex concept visualization, and support diverse learning styles. Through case studies and empirical research, we illustrate how AR applications promote active learning, critical thinking, and collaborative problem-solving. The findings suggest that AR not only enriches the educational landscape but also prepares students for a technology-driven future, making science more accessible and engaging. Recommendations for educators and policymakers on effective AR implementation in science classrooms are provided.

Article: Augmented Reality Pedagogy—A New Window in Science Learning

Introduction

The advent of digital technology has significantly altered educational paradigms, particularly in the field of science. Among these innovations, Augmented Reality (AR) stands out as a powerful pedagogical approach that enhances traditional learning environments. By overlaying digital information onto the physical world, AR creates immersive experiences that can deepen understanding and engagement in scientific concepts.

The Role of Augmented Reality in Science Education

1. **Enhancing Visualization**

   Science often involves complex and abstract concepts, such as molecular structures or astronomical phenomena. AR allows students to visualize these ideas in three dimensions, making them more tangible. For instance, AR applications can simulate chemical reactions, enabling learners to observe interactions at the molecular level.

2. **Promoting Engagement and Motivation**

   Engaging students is crucial for effective learning. AR transforms passive learning into an interactive experience. Activities like virtual dissections in biology or exploring the solar system through AR applications encourage active participation, thus increasing motivation and retention of information.

3. **Supporting Diverse Learning Styles**

   Students possess varied learning preferences—some thrive on visual stimuli, while others may excel with hands-on experiences. AR caters to these differences by offering multimodal learning opportunities. For instance, students can manipulate 3D models or conduct virtual experiments, accommodating various learning styles and needs.

Case Studies in AR Implementation: Numerous case studies have highlighted the successful application of AR in science education. One notable example is a high school biology program that integrated AR to teach genetics. Students used AR apps to visualize DNA structures and simulate genetic cross-breeding. The results showed a marked improvement in understanding and retention compared to traditional methods. Another study in an undergraduate physics course employed AR to illustrate complex physical principles, such as wave interference. Students reported increased comprehension and enthusiasm, and assessments indicated higher performance levels in AR-integrated lessons versus conventional lectures.

Illustrations on ARPA: Now a days Teachers, students and teacher-educators are using AR tools& technologies to teach science subject &make teaching learning process effectively. This viewpoint will be called as ARPA by the researchers here.

Fig. 1 Teaching dispersion of light using AR tool

Fig. 2   Teaching of magnet using AR tool

Fig. 3 Teaching of wavelength of VIBGYOR

Challenges and Considerations

While AR holds great promise, several challenges need to be addressed:

- **Technological Accessibility**:
- Not all students have equal access to the devices and internet connectivity required for AR experiences.
- **Teacher Training**:
- Educators must be adequately trained to integrate AR into their teaching practices effectively.
- **Curriculum Alignment**:

    AR applications must align with educational standards and curricular goals to ensure relevance and effectiveness.

Recommendations for Effective AR Implementation

1. Infrastructure Development:

    Schools should invest in the necessary technology and ensure reliable internet access to facilitate AR learning.

2. Professional Development:

    Ongoing training and support for educators are essential to equip them with the skills to effectively incorporate AR into their teaching.

3. Collaborative Learning: Encourage collaborative AR activities that foster teamwork and communication among students, enhancing the learning experience.

4. Evaluation and Feedback: Implement systems for evaluating the effectiveness of AR applications and gather feedback from students and teachers to refine practices continuously.

Educational Implications of Augmented Reality

1. Engagement and Motivation

- **Interactive Learning**: AR transforms traditional lessons into immersive experiences, increasing student engagement. Visualizing complex concepts in 3D can spark curiosity.
- **Gamification**: Incorporating AR elements can gamify learning, making it more enjoyable and motivating for students.

2. Enhanced Understanding of Concepts

- **Visualization**: AR allows students to visualize abstract concepts, such as molecular structures in chemistry or historical events in geography, making them more tangible and easier to understand.
- **Real-world Context**: By overlaying information on real-world objects, AR helps students see the practical applications of their studies.

3. Personalized Learning

- **Adaptability**: AR can cater to different learning styles and paces. Students can interact with content that suits their individual needs, promoting self-directed learning.
- **Immediate Feedback**: Many AR applications provide instant feedback, helping students identify mistakes and understand concepts better.

4. Collaboration and Social Learning

- **Group Activities**: AR fosters collaboration by allowing students to work together on projects, promoting teamwork and communication skills.
- **Shared Experiences**: Students can share their AR experiences, discussing insights and interpretations, which enhances learning through social interaction.

5. Development of Critical Skills

- **Problem-Solving**: AR often requires students to think critically and solve problems in interactive scenarios, preparing them for real-life challenges.
- **Technical Skills**: Engaging with AR technologies helps students develop digital literacy and technical skills that are increasingly important in the modern workforce.

6. Accessibility and Inclusivity

- **Support for Diverse Learners**: AR can provide multisensory experiences, benefiting students with different learning needs and styles, including those with disabilities.
- **Language Learning**: AR applications can support language learners by providing contextual language cues, enhancing vocabulary acquisition through immersive experiences.

7. Teacher Professional Development

- **Training Opportunities**: Educators can use AR tools for professional development, learning new teaching methods and technologies that enhance their pedagogical skills.
- **Curriculum Design**: Teachers can design AR-infused lessons that are more aligned with 21st-century skills, encouraging creativity and innovation in their teaching practices.

8. Challenges and Considerations

- **Resource Requirements**: Implementing AR may require significant technological resources and training for educators, which can be a barrier for some institutions.

- **Distraction Potential**: Without proper guidance, AR can also lead to distractions if students become overly focused on the technology rather than the content.
- **Equity Issues**: Ensuring all students have access to the necessary devices and high-speed internet is crucial for equitable learning opportunities.

Conclusion: Augmented Reality has the potential to revolutionize science education by creating immersive, engaging, and interactive learning experiences. As educators and institutions increasingly embrace this technology, it is crucial to navigate the challenges and strategically implement AR in science curricula. By doing so, we can cultivate a generation of scientifically literate individuals who are prepared for a dynamic and technology-driven world. The future of science learning through AR is not just a possibility; it is an exciting reality waiting to be fully realized.

The initial training of future teachers should be given most importance because to bring forth these , development of training activities that includes suitable places and strategies for acquisition of teaching skill is needed. future teachers should be trained well to face the challenges of 21th century. They should have knowledge of the latest technologies in educational field and also skills to design and develop educational activities by making use of these potentials.

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A STUDY OF MACHINE LEARNING'S INFLUENCE ON STUDENT ENGAGEMENT AND ACHIEVEMENT IN AI-DRIVEN VIRTUAL CLASSROOMS

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Introduction

Machine Learning: Machine learning (ML) is a subset of artificial intelligence (AI) that focuses on building systems that learn from data to make predictions or decisions without being explicitly programmed. ML algorithms improve their performance over time as they are exposed to more data. These algorithms include supervised learning, unsupervised learning, and reinforcement learning, each contributing uniquely to various applications.

Student Engagement: Student engagement refers to the degree of interest, enthusiasm, and commitment that students exhibit towards their learning. It encompasses cognitive, emotional, and behavioral aspects. Engaged students are more likely to participate actively in their studies, which can lead to higher achievement.

Achievement: Academic achievement generally refers to the measurable outcomes of students' learning efforts, often represented through grades, test scores, and overall performance. Achievement is influenced by various factors, including teaching methods, resources available, and individual student characteristics.

AI-Driven Virtual Classrooms

AI-driven virtual classrooms use artificial intelligence to create interactive and personalized learning experiences. These platforms leverage ML to adapt content, provide real-time feedback, and support individualized learning paths. They can simulate real-world scenarios and offer a dynamic educational environment that traditional classrooms may not always provide.

1. **Objectives of the Study**
   1. To study the difference between boy and girl students' engagement levels in AI-driven virtual classrooms.
   2. To study the difference between boy and girl students' achievement levels in AI-driven virtual classrooms.
   3. To study the difference between urban and rural students' engagement levels in AI-driven virtual classrooms.
   4. To study the difference between urban and rural students' achievement levels in AI-driven virtual classrooms.
   5. To study the difference between government and private college students' engagement levels in AI-driven virtual classrooms.
   6. To study the difference between government and private college students' achievement levels in AI-driven virtual classrooms.

2. **Hypotheses of the study:**
   To test the objectives 1-6 the following null hypotheses were considered.

1. There is no difference between boy and girl students' engagement levels in AI-driven virtual classrooms.
2. There is no difference between boy and girl students' achievement levels in AI-driven virtual classrooms.
3. There is no difference between urban and rural students' engagement levels in AI-driven virtual classrooms.
4. There is no difference between urban and rural students' achievement levels in AI-driven virtual classrooms.
5. There is no difference between government and private college students' engagement levels in AI-driven virtual classrooms.
6. There is no difference between government and private college students' achievement levels in AI-driven virtual classrooms.

3. Population of the Study

The population for this study includes students enrolled in AI-driven virtual classrooms across various public universities (PU) in the region of interest. This population encompasses students from diverse geographical locations and institutional types.

4. Sample

The sample for the study consists of 200 students from pre-university level. It is equally divided into gender and geographical areas and institution wise.

- **Gender Distribution**: 100 girls and 100 boys.
- **Geographical Distribution**: 100 students from urban PU colleges and 100 students from rural PU colleges also from government and private colleges from Dharwad district. For this purpose the investigator used the stratified random sampling technique. From each stratum, a proportional number of students were randomly selected to achieve the desired sample size of 200 students (100 girls and 100 boys, with an equal split between urban and rural students).

5. Variables:

- **Dependent Variables:**
    a. Student Engagement (measured through participation, interaction, and satisfaction).
    b. Academic Achievement (measured through grades, test scores, and progress reports).
- **Independent Variables:**
    a. Machine Learning Tools (specific ML technologies and their implementations)
    b. Gender (boys and girls)
    c. Location (urban and rural)
    d. Type of School (government and private)

6. Data collection procedure:

Tool 1: "Students Engagement and Learning Outcomes in Virtual Classrooms" by Smith & Johnson (2022). This tool was assessed to test the engagement and achievement metrics specific to virtual learning environments.

Tool 2: "Machine Learning Impact on Education" by Lee et al. (2021). This tool valuates the effectiveness of ML technologies in educational settings.

7. Statistical technique used for the study:

To know the difference between two groups 't' test was used for the present investigation.

Table: 1 Mean, SD and 't' value of boys and girls with respect to their influence of machine learning on engagement level and achievement level in AI-driven virtual classrooms.

Variables	Gender	n	Mean	SD	t-value	p-value	Signi
Engagement Level	Boys	100	8.67	1.98	2.50	<0.05	S
	Girls	100	7.33	1.30			
Achievement Level	Boys	100	9.75	1.57	1.089	<0.05	S
	Girls	100	9.19	1.32			

The above table reveals that there is a significant difference between boys and girls at 0.05 level with respect to their machine learning with engagement level and achievement level in AI-driven virtual classrooms. However, the mean value of boys' students is greater than the girls with respect to above variable.

Table: 2 Mean, SD and 't' value of rural and urban students with respect to their influence of machine learning on engagement level and achievement level AI-driven virtual classrooms.

Variables	Location	n	Mean	SD	t-value	p-value	Signi
Engagement Level	Rural	80	4.66	33.71	-3.17	<0.05	S
	Urban	120	5.20	39.88			
Achievement Level	Rural	80	4.66	33.71	-2.62	<0.05	S
	Urban	120	5.20	39.88			

The above table indicates that there is a significant difference between rural and urban students at 0.05 level with respect to their machine learning with engagement level and achievement level in AI-driven virtual classrooms. However, the mean value of urban students is greater than the rural students with respect to above variables.

Table: 3 Mean, SD and 't' value of students studying in government and private colleges with respect to their influence of machine learning on engagement level and achievement level AI-driven virtual classrooms.

Variables	Type of institution	n	Mean	SD	t-value	p-value	Signi.
Engagement Level	Government college	90	6.55	6.66	3.53	<0.05	S
	Private college	110	6.28	5.18			
Achievement Level	Government college	90	6.55	1.86	2.92	<0.05	S
	Private college	110	6.28	1.78			

The above table shows that there is a significant difference between students studying in government and private colleges at 0.05 level with respect to their machine learning with engagement level and achievement level in AI-driven virtual classrooms. However, the mean value of urban students is greater than the rural students with respect to above variables.

8. Findings of the tables 1-3

1. There is a significant difference between boys and with respect to their machine learning with engagement level and achievement level in AI-driven virtual classrooms.
2. There is a significant difference between rural and urban students with respect to their machine learning with engagement level and achievement level in AI-driven virtual classrooms.
3. There is a significant difference between students studying in government and private colleges at 0.05 level with respect to their machine learning with engagement level and achievement level in AI-driven virtual classrooms.

9. Implications

1. AI-driven virtual classrooms may enhance engagement and achievement for girls and urban students.
2. Targeted interventions are needed to address engagement and achievement gaps for boys and rural students.
3. Private schools may have an advantage in leveraging AI-driven virtual classrooms for improved outcomes.
4. Machine learning tools can be effective in predicting student engagement and achievement.

Preliminary findings suggest that ML tools have a significant impact on student engagement and achievement. Differences in impact are observed based on gender, geographic location, and type of school. Detailed results will be discussed in relation to the hypotheses.

10. Conclusion

This study investigated the influence of machine learning on student engagement and achievement in AI-driven virtual classrooms. The findings reveal significant differences in engagement and achievement levels based on gender, geographical location, and school type. Specifically, girls and urban students demonstrated higher engagement and achievement rates compared to boys and rural students. Private school students also outperformed government school students.

The study highlights the potential of AI-driven virtual classrooms to enhance engagement and achievement, particularly for underrepresented groups. Machine learning tools were found to significantly predict student engagement and achievement, emphasizing their importance in educational settings.

However, the study also underscores the need for targeted interventions to address engagement and achievement gaps. Educators and policymakers should consider strategies to promote equity and inclusivity in AI-driven virtual classrooms.Machine learning tools play a transformative role in enhancing student engagement and achievement within AI-driven virtual classrooms. The influence of these tools varies across different demographic and institutional

factors. The study highlights the need for tailored ML applications to address diverse educational needs effectively.

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ADVANCES IN TECHNOLOGY-ENHANCED LEARNING IN SCIENCE EDUCATION: IMPACTS ON SCIENTIFIC TEMPERAMENT AND LOCUS OF CONTROL AMONG STUDENTS OF SIKKIM'S SECONDARY SCHOOLS

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Abstract

Technology-enhanced learning (TEL) has revolutionized science education, creating more interactive, personalized, and inquiry-driven environments for students. This article focuses on the impact of TEL on fostering scientific temperament and shaping the locus of control among secondary school students in Sikkim. Scientific temperament, characterized by curiosity, logical reasoning, and critical thinking, is crucial for academic success in science. The locus of control determines how students perceive their influence over academic outcomes, with an internal locus correlating with higher self-efficacy and problem-solving abilities. In Sikkim, TEL offers unique opportunities to overcome infrastructural challenges in rural schools by providing virtual labs, simulations, and personalized learning platforms. Drawing on ten studies, this article explores how TEL enhances students' engagement with science, promotes inquiry-based learning, and encourages a shift towards an internal locus of control. Recommendations for expanding TEL in Sikkim's education system include improving infrastructure, offering teacher training, and developing culturally relevant content.

Keywords: Technology-enhanced learning, scientific temperament, locus of control, secondary education, Sikkim, science education, virtual labs, inquiry-based learning, digital tools, academic achievement.

Introduction: Technology has profoundly influenced education over the past century, transforming the ways students learn and teachers teach. In the 20th century, technological tools such as projectors, audio-visual aids, and early computers marked the beginning of this transformation. These innovations provided educators with new ways to present information and facilitate learning, but the constraints of the technology limited their impact at the time. However, the advent of digital technology in the 21st century has completely changed the educational landscape. More interactive, individualized, and adaptable learning experiences are now possible because of the internet, mobile devices, virtual reality, artificial intelligence, and cloud-based platforms. Using these resources, students may work with classmates, access instructional materials from any location, and participate in experiments and simulations previously limited to specialized labs. Thanks to technology, education is now more student-centric than teacher-centric, with students actively participating in their education to develop their critical thinking, creativity, and problem-solving abilities. In the context of Sikkim, a state in northeastern India with a significant rural and geographically isolated population, technology-enhanced learning (TEL) offers a way to overcome the limitations of physical infrastructure in schools. Traditional science education in Sikkim has faced challenges due to the lack of fully equipped laboratories and resources in many rural schools. However, TEL tools such as virtual labs, simulations, and digital learning platforms have the potential to bridge these gaps, providing students with access to high-quality science education. As digital infrastructure improves, Sikkim's schools can leverage TEL

to foster scientific temperament and promote a shift toward a more internal locus of control among students, empowering them to take greater responsibility for their learning outcomes.

1. Technology-Enhanced Learning in Science Education

Technology-enhanced learning (TEL) refers to the use of digital tools and platforms to support and improve traditional educational practices. In science education, TEL has introduced innovative methods for teaching complex concepts through virtual labs, simulations, and interactive educational software. These tools have transformed classrooms into dynamic spaces where students can engage with scientific ideas in ways that were not previously possible.

One of the most significant innovations in TEL for science education is the virtual laboratory. Virtual labs allow students to conduct experiments in a digital environment, simulating real-world scientific phenomena without the need for physical equipment. Prasad (2018) highlighted that virtual labs provide students with the opportunity to experiment with variables, observe outcomes, and make adjustments in a controlled environment. This enables students to engage in inquiry-based learning, where they take an active role in the scientific process by forming hypotheses, conducting experiments, and analyzing results. Virtual labs are particularly beneficial in regions like Sikkim, where physical science labs may be scarce or under-equipped.

Additionally, TEL platforms such as simulations and interactive learning tools allow students to visualize complex scientific concepts. Simulations can model processes that would be difficult or impossible to observe in a traditional classroom, such as molecular interactions or astronomical events. According to Bhattacharya (2019), these tools not only help students grasp abstract concepts but also promote deeper understanding by allowing them to manipulate variables and observe immediate outcomes. This interactive approach to learning helps students build a strong foundation in scientific principles, fostering curiosity and engagement.

TEL also enables personalized learning, where digital platforms adapt to individual students' learning needs. These platforms provide instant feedback, allowing students to review their progress and focus on areas that require improvement. In Sikkim, where access to qualified science teachers may be limited in some areas, personalized learning tools can supplement classroom instruction, ensuring that all students have the opportunity to succeed in science education.

2. Fostering Scientific Temperament Through TEL

Scientific temperament is an essential aspect of science education, encompassing traits such as curiosity, scepticisms, and critical thinking. A strong scientific temperament encourages students to question assumptions, seek evidence, and approach problems logically. Technology-enhanced learning plays a crucial role in fostering this mindset by promoting inquiry-based learning and providing access to a wealth of scientific information and resources.

Inquiry-based learning, facilitated by TEL, encourages students to take an active role in the learning process. Instead of passively receiving information, students are guided to explore scientific questions, conduct experiments, and draw conclusions based on their observations. Meena (2020) found that students who engaged in virtual simulations and digital experiments demonstrated a higher level of curiosity and critical thinking compared to those in traditional classrooms. By allowing students to experiment in a safe, controlled environment, TEL fosters a mindset of exploration and inquiry, which is at the heart of scientific temperament.

Furthermore, TEL tools often incorporate real-world scientific data and current research, exposing students to the latest developments in science. This exposure not only enhances students' understanding of scientific concepts but also inspires them to explore scientific careers and research opportunities. In Sikkim, where students may have limited access to physical science labs or extracurricular science activities, TEL can provide a platform for developing a strong scientific temperament. Digital tools such as virtual science fairs, interactive webinars, and online scientific communities can further promote a culture of inquiry and innovation.

In rural areas of Sikkim, where traditional science education may be constrained by limited resources, TEL can offer a valuable alternative. Virtual labs and simulations allow students to engage in hands-on learning experiences that would otherwise be unavailable, helping to develop their scientific temperament despite infrastructural challenges. As these tools become more accessible, they hold the potential to transform science education in Sikkim, fostering a generation of students with strong critical thinking and problem-solving skills.

3. Shaping Locus of Control Through TEL

Locus of control is a psychological concept that refers to how individuals perceive their ability to influence outcomes. Students with an internal locus of control believe that their actions and efforts directly affect their academic success, while those with an external locus of control attribute success to external factors, such as luck or teacher influence. A shift toward an internal locus of control is associated with higher motivation, self-efficacy, and academic achievement.

TEL has the potential to promote an internal locus of control by giving students more autonomy over their learning. Digital platforms, such as online quizzes, personalized learning systems, and self-paced tutorials, allow students to take control of their education. Ghosh and Das (2021) found that students who regularly engaged with TEL tools were more likely to develop an internal locus of control, as these platforms provided immediate feedback and allowed students to track their progress in real time. This autonomy helps students understand that their efforts directly impact their learning outcomes, fostering a sense of responsibility and self-efficacy.

In Sikkim, where classroom time may be limited and access to resources uneven, TEL offers a valuable opportunity for students to take charge of their education outside of school hours. With access to online learning platforms, students can revisit difficult concepts, practice problem-solving skills, and receive feedback at their own pace. This shift in learning dynamics encourages students to develop an internal locus of control, which can lead to improved academic outcomes and greater confidence in their abilities.

Research conducted by Bhattacharya (2019) in rural Indian schools suggests that students exposed to TEL demonstrated increased motivation and self-efficacy, largely because TEL platforms allowed them to engage with content in a more meaningful and personalized way. For students in Sikkim, where traditional teaching methods may not always provide the support needed to build self-efficacy, TEL tools can offer a critical resource for fostering an internal locus of control and encouraging academic achievement.

4. Challenges and Opportunities for Implementing TEL in Sikkim

While TEL offers significant benefits, its implementation in Sikkim faces several challenges, particularly in rural areas. One of the primary obstacles is the digital divide, with many remote schools

lacking reliable internet access or sufficient digital devices. Chhetri (2021) noted that while efforts to introduce TEL in Sikkim have been successful in some urban areas, rural schools continue to face infrastructure barriers that limit students' access to digital learning tools. Addressing these infrastructure challenges is essential for ensuring that all students in Sikkim can benefit from TEL.

Teacher training is another critical challenge. Effective implementation of TEL requires teachers to be proficient in using digital tools and integrating them into their lessons. Bhutia (2020) emphasized that while TEL has the potential to transform science education, its success depends on teachers' ability to effectively use digital platforms to engage students. Professional development programs focusing on TEL are necessary to equip teachers with the skills and knowledge needed to make the most of these tools.

Despite these challenges, there are significant opportunities for expanding TEL in Sikkim. The Government of Sikkim has introduced several policies and initiatives aimed at integrating new technologies into the education system and providing funding for their implementation in schools. These policies are part of broader efforts to modernize education in the state, ensure equitable access to digital resources, and improve the overall quality of education, especially in rural areas. Here are some of the key policies and initiatives:

1. Digital Sikkim Initiative

The Digital Sikkim Initiative aligns with the central government's "Digital India" campaign, aiming to enhance digital literacy, improve connectivity, and promote the use of information and communication technology (ICT) in education. As part of this initiative, the government has been working to provide internet connectivity to schools, distribute tablets and computers, and ensure access to e-learning resources. The initiative focuses on integrating ICT into the curriculum, ensuring teachers and students are digitally literate, and promoting the use of e-resources in teaching and learning.

2. Smart Classrooms Program

The Government of Sikkim has taken steps to introduce smart classrooms in many schools. These classrooms are equipped with interactive whiteboards, projectors, and internet-connected devices to facilitate technology-based teaching. The program aims to create an engaging learning environment by using multimedia content, simulations, and digital tools to enhance the teaching of science and other subjects.

3. Information and Communication Technology (ICT) in Schools Scheme

Under the national ICT in Schools scheme, Sikkim has received funding to improve the technological infrastructure in government schools. This program is aimed at promoting the use of technology in education by providing hardware, software, and training to teachers. Schools in Sikkim, especially those in rural areas, have benefited from this initiative by gaining access to computer labs, digital learning platforms, and ICT training programs.

4. State Level Science and Technology Program

Sikkim has a dedicated Science and Technology Department, which oversees the promotion of science education and technology-related initiatives in schools. The government organizes science fairs, exhibitions, and workshops aimed at encouraging students to take an interest in STEM (Science, Technology, Engineering, and Mathematics) subjects. Funding is also provided to schools for the development of science labs and the use of digital tools in teaching.

5. Rashtriya Madhyamik Shiksha Abhiyan (RMSA) – ICT Integration

Under the centrally sponsored Rashtriya Madhyamik Shiksha Abhiyan (RMSA), the state of Sikkim has received financial assistance for improving the quality of secondary education. One of the key components of this program is the integration of ICT in teaching and learning. RMSA supports the establishment of ICT labs in schools and the provision of digital teaching materials, with the goal of enhancing the learning experience and improving academic outcomes.

6. Sikkim's Budget Allocations for Education Technology

Sikkim's annual state budgets often include allocations for education technology. These budgets have earmarked funds for improving the ICT infrastructure in schools, including broadband connections, digital classrooms, and e-learning resources. The government has focused on building the capacity of teachers to use these technologies effectively in classrooms through workshops, training programs, and continuous professional development initiatives.

7. Skill Development and E-Learning Centers

The Government of Sikkim has also promoted the development of skill development centers that incorporate e-learning tools. These centers, often established in collaboration with private partners, aim to equip students with technical skills and vocational training, making them more employable in the digital economy. The centers offer courses in digital literacy, coding, and other technology-related fields.

8. National Education Policy (NEP) 2020 – Implementation in Sikkim

The state of Sikkim is in the process of implementing the National Education Policy (NEP) 2020, which places a strong emphasis on the use of technology in education. As part of NEP 2020, the state government is focusing on improving digital infrastructure, integrating online and offline education, and promoting technology-based assessments. This includes developing digital content in local languages and offering teacher training programs focused on the use of ed-tech tools.

These policies reflect the Sikkim government's commitment to modernizing education through technology and ensuring that students have access to high-quality learning resources despite geographical challenges.

Conclusion: Advances in technology-enhanced learning have the potential to significantly impact science education in Sikkim, particularly by fostering scientific temperament and promoting an internal locus of control among secondary school students. TEL tools such as virtual labs, simulations, and personalized learning platforms provide students with opportunities to engage in inquiry-based learning, develop critical thinking skills, and take greater responsibility for their academic success. While challenges related to infrastructure and teacher training remain, the ongoing efforts to improve digital access and resources in Sikkim hold promise for the future of science education in the region. By integrating TEL into classrooms, Sikkim can ensure that its students are equipped with the skills and mindset needed to succeed in the 21st-century scientific landscape.

A significant leap still needs to be made.

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EMERGING TECHNOLOGIES FOR BEST LEARNING OUTCOMES

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Abstract

Technology is the more comprehensive backbone for various organizations. A smart education becomes a trend in education that meets sustainability objectives. Developments in Artificial Intelligence, Block Chain Technology, Cloud Computing, Machine Learning, M2M Communication, 5G/6G Networks, and other emerging technologies have transformed the traditional educational system into one that is more intelligent, interactive, and collaborative. New technologies have a big impact on blended learning, online learning, and offline learning. The innovative development of the Internet of Things has improved teacher-student communication and improved outcome-based learning. In the sphere of education, students employ modern technology to complete assignments. With the aid of 3-D models and videos, students can comprehend material and evaluate data. Artificial intelligence's usage in course design and student learning route recommendation. The goal of this research is to investigate the cutting edge technologies for outcome-based educational systems. Education is becoming into a ubiquitous, institutionalized, and intelligent process. The effectiveness and efficiency of smart education are increased by emerging technology.

Keywords — Emerging Technologies, Higher Education, Internet of Thing, Learning Outcome, Smart Education, Sustainability Teaching.

I. Introduction: The education sector has embraced the most recent improvements and breakthroughs in technology. These advancements have enhanced the educational process and also made easy for kids to understand. Now a days, Information Technology's (IT) is primarily focusing on academic institutions like flexibility and judgment determining, student results [1, 2]. ICT is enabled in education sector due to the adaptability and demands of the students. Institutions of Higher Learning (HEI) have begun to increase productivity with contemporary technologies, change, wholeness, and interpersonal interaction. The advancement of digital equity and the modification of conventional organizational paradigms to promote the workplace of the future are challenges for HEI today [3, 4]. HEI also has to contend with competitiveness, finance, quality, and demography. For them to succeed, new methods of instruction and learning that will equip students with the skills they need must be implemented. It must figure out how to modify technology to draw in teachers and students, streamline processes, and save expenses. According to author in [5], the education sector must always be evaluated and changed to keep up with evolving business trends. In order to create strategies for managing and governing educational data, Higher Educational Institutions must integrated with institutions [6]. Mobile technology, video conferencing, remote access systems, educational platforms are some of the growing technologies that are now being utilized in the educational industry. Convergence of new technologies in education includes artificial intelligence (AI), block-chain, big data, cloud computing, edge computing, Internet of Things (IoT), mobile computing (3G/4G/5G), robotic process automation, etc. The creation of an intelligent learning environment is made possible by these technologies.

A. Motivation:

Educational institutions now a days must store their data for a number of years in order to analyze it. These educational data is tested by the educational administrators to simulate various scenarios. Real-time analytic can be applied by educational institutions to video surveillance data, as

well as social media platforms. As a result, educational institutions need to address the volume, pace, and variety of data concerns. Coordination is one of the concerns issues with data ecosystems in the contemporary educational system.

B.   *Challenges and Solution in Higher Education*

The most challenging issue in the traditional teaching is question paper leaking at the time of exam which affects the quality of the education system. Smart education system enhances the quality of the education system by creating a different learning experience like online courses (NPTEL, MOOC), formative assessments, and professional development [7]. HEI needs to cope with the methodology and also needs to adopt a *new approach* to education. HEI must encourage by issuing credentials certifications [8]. HEI needs to need to prepare technological solutions that are flexible and modified quickly according to the students and teachers**.**

To overcome these issues HEI can utilize some of the emerging technology in education like Virtual Reality (VR), Machine Learning (ML), Deep Learning (DL) and Artificial Intelligence (AI) .Chat boats are answering inquiries about homework, course availability, and enrollment which helps for best preparation in education. Using ICT in the classroom improve lesson effectively [9].

II.   The Theoretical Framework of Smart Systems: Smart Systems follows the computer methodology and architectural design which enables intelligent physical systems to actual world. It combines sensing, actuation, and communication with reasoning problems. It integrates the networks like AI, ML, DL, 5G/6G IoT, WSN makes data a key component for many application systems [10-14]. It also includes software programming, hardware devices, networking, and embedded platforms. Smart education system makes learning environments, innovative approaching, collaboration, self-motivation and many more [15]. The various function of the smart education system is shown in the figure 1. It mainly covers smart education, smart decision, smart tools and smart management systems, which is discussed below.

A.   **Smart Education**

Best conveniences and best adaptability of smart education become necessity for all. It has drawn attention because it uses communication to connect different knowledge domains and disciplines for institutional objectives. Many governments have boosted their investments in educational technologies since the late 1990s, believing that integrating technology into the classroom would improve instruction and advance student learning [16,17]. The "black board & chalk" method of classroom instruction has given way to "computer & projection" mode with the help of smart classroom [18]. With the use of modern technology, smart learning/digital learning offers student comprehensive education. Using developing technology, teacher and learners can modify present skills to be used in traditional classroom settings.

B.   **Smart Decision**

Large amounts of heterogeneous data must be managed, analyzed, and visualized by educational institutions for a variety of uses. From the gathered data, they use a variety of academic procedures, methodologies, and technologies to make decisions. As a result it constructs numerous theoretical, analytical models. These analytical frameworks facilitate data entry into dashboards, student admissions, publicity, and accountability. Academic and learning analytic, which came about from various applications, form the basis of educational decision.

C.   **Smart ICT Tools**

HEI assess educational administrators have the opportunity to make much-needed changes since they are in a position to act [19]. It must comprehend how innovative technologies can assist educational institutions. By using digital platforms like Google teachers can keep students interested and enthusiastic about their academics. Compared to standardized tests, big data technologies may provide deeper insights into each student's talents and abilities. IoT has the ability to monitor if homework and assignments have been completed as well as how long it took to finish them. Teachers can use this information to have a better understanding of their students struggles and the things that they find most difficult.

D.   **Smart Management**

A smart management is created by the digital transformation to smart systems that require sizable, highly data-rich smart environments. Educational institutions design their ecosystem model and architecture with the purpose of collecting, storing analyzing, and acting upon data. Data management is the intelligent learning settings in a smart management. The design of the learning data ecosystem must be straightforward from the stand point of usability [20]. Through smart management, we can communicate to students by SMS, support them in continuing their education, assist for job placement, and facilitate communication with stakeholders such as parents, alumni, and industry experts. The most important factor is an educational institution is accreditation (NBA, NAAC), which goes smoothly. At last, we can improve the efficiency and security of an institution by smart management.
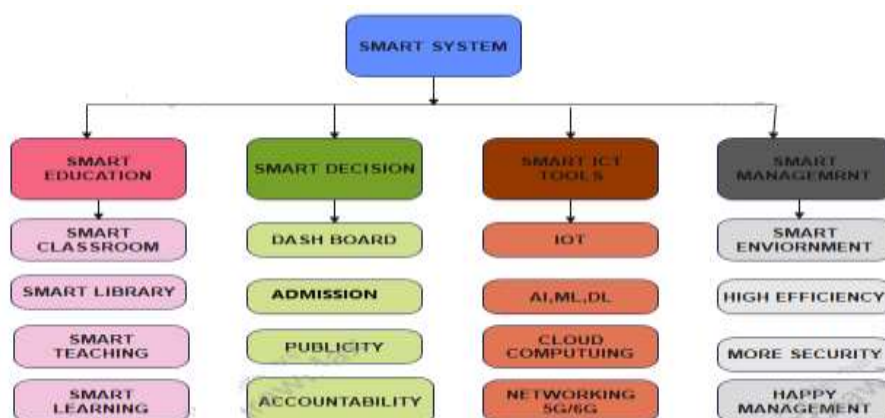
Figure 1: Different parameter in the smart system

III.   Emerging Technologies: A literature review has been conducted on a number of developing technologies on education system includes Networking, Block-Chain, Embedded System, Cloud Computing, ML,AI, DL and IoT. These newly developed technologies have been covered in the next section. From the literature review emerging technologies play a major role in the outcome based education due its easy accessibility, flexibility, and quickness.

   A.   Networking Technology

Artificial Intelligence, social media, and mobile phones are only a few examples of the new technologies that have a big impact on education system. By using digital connectivity we can support online classes, distance education and virtual learning by the visual and audio data that may be delivered

by current Internet and pre-5G cellular communication networks. However, a new educational paradigm known as Education 4.0, which requires remote physical interaction between students and learning facilities [21]. The fifth generation (5G) networking expand the quantity of connected devices and electronic resources in schools. With the help of 5G technology we can increase the gain efficiency and also speedy downloading. It makes seamless connectivity with the international students to increase participation.

B.   Block- Chain Technology

Block chain technology has drawn a lot of interest lately from academics and industry professionals [22]. This is due to its special qualities, which include data integrity, decentralization, security, and dependability [23]. The next advantage of the educational system is the gathering and proper management of student data [24]. It also offers transparency and accountability [25]. This increases the level of trust between student and teachers [26]. By eliminating unnecessary data cost exchanges, block chain technology lowers the cost of education and data storage. Block chain technology can be very helpful in verifying students identities and digital credentials [27].

C.   Cloud Computing Technology

Cloud computing technology facilitates the exchange of instructional materials between faculty and students. It also reduces the information gaps that exist between various subjects in today's curriculum. Now a days higher education institutions (HEI) have begun to invest in mobile cloud computing technology which emphasizes its beneficial effects on education [31]. It enables teachers to enhance their lesson plans, pedagogic, and techniques. Teachers, administrators, and students must use the education cloud [32].

D.   AI Technology

Introduction of AI in education system brought innovative, rich, and individualized teaching techniques that will fundamentally alter students education [33]. AI technologies assist in enabling global classrooms that are accessible to everyone. Students are receiving personalized feedback from AI. It gives instances of how artificial intelligence is being developed and used in smart education [34]. The relevant institutional review board (IRB) provides ethical permission for data collection and research operations from Google, ChatGPT, and Google scholar. From AI students get course material in time and got better grades. We got major assistance of AI at the time of COVID-19.

E.   ML Technology

Programming gets better understand of students drive to study further. Machine learning algorithms assist in identifying student groups that are similar to one another and allow various activities to those groups. It is possible to forecast a student's future performance, aptitude, interaction, learning style, etc. using machine learning techniques.[35]. In recent years, machine learning has gained relevance for a wider range of applications, including job automation, privacy concerns, facilitating education institution and many more. [36, 37, 38].

F.   IoT Technology

IoT enable the students to participate in immersive learning, which is a highly effective learning. Effective cost management requires IoT technologies. Deployment of IoT in campus we can increase the quality of education system [41]. Key elements of a university education, including teaching, learning, research, innovation, and support services, can be enhanced by IoT. Processes

involving faculty and administration goes smoothly and campus infrastructure is managed more effectively, economically, and to a high degree of quality. Furthermore, IoT encourages student creativity across campus, which enhances interactive learning [42, 43].

IV.   Result & Discussions

Rapid technological advancements have led to the creation of smart campuses, which provide high-quality services. Revolutionary academic institutions pedagogical approaches are implemented in worldwide at Covid-19 pandemic. Using modern technologies, smart education facilitates collaboration, timely alerting, and teaching/learning more effectively. The classroom, campus, administration, decision-making, etc. are all improved by smart education. Both end users and educational administrators should be aware of how emerging technologies are now being used in the classroom. Table 1, 2, 3 shows the benefits of emerging technologies in outcome based education system for students, teachers and educational institutions.

Table 1. Impact of Emerging Technology on Outcome Based Education System for Students

Effect on Students		
Key Benefit for Students	**Key Channel**	**Key Resources**
* Improved knowledge * Assistance in job * Improving skills * Entertainment *Improved skill for societal needs * Time save * Higher studies	* Online/Offline classes * Mobile app * Participation in conferences, SDP(Student Development Program) * Web based interference	* e book * Contents (Google, Chat GPT) * Courses (NPTEL,MOOC) * Io T technology * Faculty members * Pedagogical innovation

Table 2. Impact of Emerging Technology on Outcome Based Education System for Teachers

Effect on Teacher		
Key Benefit for Teacher	**Key Partners**	**Key Relationship**
* Improved teaching methodology * Helps in promotion * Entertainment * Improve comport * Time save * Customized curriculum * Personalized improvement * Courses (NPTEL, MOOC) * Higher studies * Participation in FDP (Faculty Development Program) conferences, Webinars, Symposium	* Government agencies * Research agencies * Collaboration with industry partners for Mo U activities * Accreditation bodies	* Interaction with alumni * Interaction with parents * Interaction with other universities * Interaction with social connect

Table 3. Impact of Emerging Technology on Outcome Based Education System for Educational Institution

Effect on Educational Institutions		
Key Cost Structure	**Key Revenue Generation**	**Key Customer Segments**
* Effective maintenance * Effective management * Effective technologies * Effective publicity * Salary for staff members	* Government agencies * Research agencies * Tuition * Good admission	* Students * Parents * Government * Industry partners

VI. Conclusion: Emerging technologies serve as the facilitators in recent education system. Teachers and principals are superintend to classroom operations, and keep up with emerging technological advancements. It is imperative that they take the lead in implementing technology in their classrooms. Learning designers must make sure that students have access to a variety of technological tools and resources that are suitable for their age and learning requirements in order to reshape teaching and learning engineering. The work exposure the effect of emerging technology on smart educational system.

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TECHNOLOGY-ASSISTED STUDENT ASSESSMENT: INNOVATIONS, IMPLICATIONS, AND FUTURE PROSPECTS

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Abstract

Technology-assisted student assessment (TASA) refers to the use of digital tools and platforms to enhance and streamline the evaluation process, offering efficiency, real-time feedback, and personalized learning experiences. Technology-assisted student assessment is revolutionizing the educational landscape, offering new approaches to evaluating student learning and performance. The integration of technology into educational assessment has transformed traditional methods of evaluating student learning. This article explores how technology has transformed traditional assessment methods through innovations like automated testing, personalized feedback, learning analytics, and adaptive assessment systems. Additionally, it examines the potential challenges, such as equity, data privacy, and the role of educators in this tech-driven environment. It provides a comprehensive examination of the key technologies, benefits, challenges, and future directions in technology-assisted student assessments, highlighting its potential to enhance learning outcomes while addressing potential concerns regarding equity, data privacy, and the human element in education. The article concludes with a discussion of future prospects, outlining how technology might further shape the evolution of student assessment in educational settings.

Keywords: Technology, Student Assessment, Technology-assisted Assessment, Adaptive Learning, e-assessment, Learning Analytics, Student Performance, Digital Education, Educational Technology, Online Assessment.

Introduction: Assessment is a core element of the educational process, essential for evaluating the learning progress of students and guiding instructional practices. Traditional forms of assessment, including written exams and paper-based tests, have dominated education for centuries. However, the rapid advancement of technology has introduced new forms of student assessment that aim to be more efficient, objective, and responsive to the needs of both students and educators. Technology-assisted student assessment (TASA) encompasses a wide array of digital tools, platforms, and methodologies designed to enhance the quality and effectiveness of student evaluations.This paper explores the various types of technology-assisted assessments, their benefits, challenges, and the potential future of educational assessment through technology.

Technological Tools in Student Assessment: Technology-assisted assessments take many forms, from basic online quizzes to advanced adaptive testing systems that personalize questions based on student performance. Key technologies include:

- **Computer-Based Testing (CBT):** One of the most commonly used methods, CBT involves students taking tests via a digital platform. These assessments can be time-efficient, automatically graded, and available across multiple devices.
- **Learning Management Systems (LMS):** LMS platforms like Moodle, Blackboard, and Canvas often integrate various assessment tools such as quizzes, discussions, and peer evaluations. They also allow for continuous assessment and provide instant feedback, tracking student performance over time.

- **E-Portfolios:** E-portfolios provide students with a platform to collect, reflect upon, and showcase their work over time. This approach encourages self-assessment and deeper engagement with the learning material, enabling formative assessment in diverse subject areas.
- **Automated Essay Scoring (AES):** Using Natural Language Processing (NLP) algorithms, AES tools can evaluate written responses and essays, providing feedback on structure, grammar, and content. Although it is still debated whether machines can effectively measure complex written expression, these systems assist in reducing grading time for educators.
- **Learning Analytics:** The use of data analytics in education has led to the development of learning analytics, which collects and analyzes student interaction data. Learning analytics can help identify at-risk students early and support tailored interventions.
- **Gamification and Simulations:** Interactive simulations and gamified assessments engage students in learning through immersive environments, which can assess higher-order thinking, problem-solving, and decision-making skills.

Advantages of Technology-Assisted Assessment

Efficiency and Scalability: Technology-assisted assessments allow for large-scale testing with reduced logistical complexity. Automated grading systems reduce the time required for teachers to manually evaluate students' work, freeing up time for more personalized instruction. CBT platforms can accommodate large numbers of students across different locations, making them ideal for standardized testing or large-enrollment courses.

Immediate Feedback: One of the greatest strengths of technology-assisted assessment is the potential for real-time feedback. Instant feedback has been shown to reinforce learning, particularly in formative assessments where students can immediately understand their mistakes and correct them. This promotes a continuous learning process as opposed to episodic, summative assessments.

Personalization: Adaptive learning technologies, including AI-driven assessments, allow for personalized testing experiences. Questions and tasks can adjust to the individual skill level and learning needs of students, helping them engage with material at an appropriate pace. This level of personalization fosters a more inclusive learning environment where students with varying abilities and learning styles can thrive.

Data-Driven Insights: Technology enables educators to collect extensive data on student performance, allowing for deeper insights into learning trends and outcomes. Learning analytics can identify areas where students struggle, enabling timely intervention. This data-centric approach can also guide curriculum adjustments and help institutions improve educational practices overall.

Challenges in Technology-Assisted Assessment

Equity and Access: A major challenge of technology-assisted assessment is ensuring that all students have access to the necessary tools and technology. Digital divides—caused by disparities in access to reliable internet, computers, or software—can disadvantage students from low-income or rural areas, exacerbating existing inequalities in education.

Data Privacy and Security: With the increasing use of digital tools in assessment comes the issue of data privacy and security. Student data, including personal identifiers and performance information, must be securely stored and protected from unauthorized access. The risks of data breaches and misuse

of sensitive information are of great concern, raising questions about how data is collected, stored, and shared within the educational ecosystem.

Technological Limitations: Despite the advancements in technology, there are still limitations in how well machines can assess complex cognitive processes, such as creativity, critical thinking, or interpersonal skills. Automated scoring systems for essays or open-ended questions are still limited in their ability to fully understand nuances of human expression.

Teacher Training and Acceptance

The success of technology-assisted assessments also depends on teachers' ability and willingness to integrate these tools into their instructional practices. In many cases, educators need extensive training to use these tools effectively. Additionally, some educators may be skeptical of relying too heavily on technology for assessment, preferring more traditional methods.

The Role of Human Oversight in Technology-Assisted Assessment

While technology can automate and enhance the evaluation process, **human oversight** remains critical to ensure that assessments are both fair and effective. Teachers play a vital role in interpreting assessment data, providing meaningful feedback, and adapting their instruction based on students' needs. In addition, educators bring the **emotional intelligence** and **pedagogical expertise** necessary to assess areas of learning, such as creativity, collaboration, and critical thinking, which are harder for machines to evaluate.

To optimize the effectiveness of technology-assisted evaluations, a **blended approach** that combines the strengths of digital tools with human judgment is necessary. Teachers and technology must work together to create a comprehensive and personalized assessment experience for students.

Future Directions in Technology-Assisted Assessment

The future of technology-assisted assessment is likely to involve the further integration of artificial intelligence (AI) and machine learning to create increasingly sophisticated and personalized learning environments. Some key areas of development include:

- **Adaptive and AI-Driven Assessments:** As AI continues to evolve, assessments will become more personalized and adaptive, adjusting in real-time to student performance. These systems may also analyze more complex aspects of student work, such as critical thinking and problem-solving abilities.

- **Virtual Reality (VR) and Augmented Reality (AR):** VR and AR technologies offer potential for immersive assessments, particularly in subjects like science and engineering, where students can interact with 3D models or simulate experiments in a controlled environment.

- **Block chain for Secure Assessments:** Block chain technology could offer solutions for securing student data, ensuring the integrity of assessments, and validating academic credentials.

- **Ethical Considerations:** As technology continues to play an increasing role in education, ethical questions surrounding its use, particularly in assessment, will need to be addressed. Issues related to surveillance, data rights, and algorithmic biases will become central to the conversation.

Conclusion: Technology-assisted student assessment has the potential to enhance educational outcomes by providing efficient, personalized, and data-driven evaluations of student performance.

However, its successful implementation requires addressing key challenges related to equity, privacy, and the evolving role of educators. As technology continues to advance, the future of assessment will likely be shaped by AI, immersive technologies, and secure digital infrastructures like block chain. These innovations promise to make assessments not only more accurate and efficient but also more aligned with the diverse needs of 21st-century learners.

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INFLUENCE OF SOCIL MEDIA ON ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENT

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Abstract

The purpose of this research study is to examine the influence of Social Media on Academic Achievement of the students of the Secondary School Students of Gadag district. Students' academic performance is influenced by social factors. These factors include romantic relationships, student cults, membership in clubs and organizations, and sports. Sampling via mid-point square approach was used to compare social variables with the students' CGPA. Both the f-test at 0.05 level of significance and regression indicate that romantic relationships and student cults have a significant effect on academic performance, while club or organization activity and excessive sporting is not significant. Social media offers various educational benefits. It serves as a platform for sharing knowledge, ideas, and resources among students and educators. Social media communities and groups provide opportunities for collaborative learning, enabling students to discuss and explore academic topics beyond the classroom

Key words: *Social Media, Academic Achievement, Benefits of Social Media*

Introduction

Social media connects people worldwide, gaining significant momentum due to widespread smartphone use. Almost everyone has a social media account, with students also extensively engaged. Despite time-wasting perceptions, social media offers substantial benefits. Now let's read the top 5 benefits of social media for students in this blog.

Before jumping into the benefits of social media, let us try to understand it better. There are different types of social media that exist today:

- Social Networking (Facebook, Linked-In)
- Micro blogging (Twitter, Threads)
- Photo Sharing (Instagram, Snapchat, Pinterest)
- Video Sharing (YouTube, Facebook-live, Periscope)

Combining all of them together, social media has gained a lot of importance because of the drastic increase in the number of users. As we can see (ref – statistics below) that there are **2.35 billion active monthly users on Instagram alone**. Thanks to their age group and easy access, various social media sites are accessing them. According to one of the recent report from Forbes, percentage of students who use each platform goes as follows:

- Facebook – 2.9 Million
- YouTube – 2.5 Million
- Tiktok – 1.0 Million
- WhatsApp – 2.0 Million

Top 5 Benefits of Social Media

Examining the advantages of social media for students reveals its paramount importance. As you can see, social media has revolutionized the way we connect and interact with one another. From fostering communication to promoting creativity and facilitating global connectivity, social media has become an indispensable tool for personal and professional growth. Now it's time for us to jump into the top five benefits of social media for students, according to us.

1. Learning & Networking

The first of top 5 benefits of social media for students is Learning and Networking. Learning has gone beyond class-rooms where social learning is promoted in almost all the leading **e-learning websites.** Students can take classes from e-learning websites and discuss their learning or doubts using various social media channels.

For Example NPTEL, Udemy, YouTube, etc. Students can make use of live video that is a part of so many social networking sites to engage themselves in classes. Students can share study materials through social networking sites like Facebook, Instagram and even Whats App.

In the realm of social learning, understanding the benefits and importance of social media for students is crucial. It becomes exceedingly important for students to stay connected to their peers in this process. Through social media, students can forge connections not only with their immediate friends but also with friends of friends, thereby building a robust network. Peer-to-peer networking plays a pivotal role in enhancing online engagement and fortifying the learning experience.

2. For Creative Expression

Social media offers numerous benefits, making it especially advantageous for students. Creative expression stands out as one of the paramount benefits of social media. With an array of multimedia tools and platforms at their disposal, individuals can unleash their creativity and share their unique perspectives with the world.

One of the advantages of social media for students is that it provides a beautiful platform for them to express themselves. Students can utilize various mediums such as **photos, blogs, articles, videos, and audio clips** to articulate their thoughts and ideas. The introduction of Instagram Reels and TikTok Videos has taken video creation to new heights, becoming a super hit among the student community due to their small and crisp format.

Moreover, social media plays a vital role in encouraging students to explore their talents and think outside the box. It helps in identifying students' talents and provides them with opportunities in life, eliminating the need to wait for traditional platforms like TV shows to showcase their abilities.

In fact, many students have harnessed the importance of social media by creating their own YouTube channels, offering them not only a great platform for self-expression but also the potential to build a career out of it. The advantages of social media for students are undeniably significant in fostering creativity, personal growth, and future opportunities.

3. Experience Global Exposure

Social media is such a broad platform that students can connect with anyone in the world. When it allows students to interact with people on such a broad platform, indeed they get immense knowledge from it, which is amazing, isn't it ?

They even get to know about the diverse cultures present around the world. That includes their **culture, traditions, language, lifestyle, food habits, and many more interestingly beautiful things.** They can even learn about the different courses present in universities from all around the world. Some of the universities who provide free resources and courses

Which benefit students from all around the world are :

- Harvard University : Harvard University offers over **600 free online courses** and enables you to get a taste of an Ivy League education for free.

University of California : The University of California, Irvine offers a variety of courses on a wide range of subjects.

- Georgia Institute of Technology : Georgia Institute of Technology has been offering online courses since 2012. Since then, 3.3 million people have enjoyed these world-class courses, in a wide range of topics.
- Michigan State University : One of the largest universities in the United States, Michigan State University offers a selection of online courses.
- One of the advantages of social media for students is the ability to access recorded classroom sessions for specific courses, often accompanied by comprehensive notes. This educational resource not only enhances their learning experience but also provides valuable study materials.
- Furthermore, social media platforms empower students to share their ideas and thoughts on a global scale, contributing to the benefits of social media. These platforms offer individuals a unique identity and recognition, even at a young age, which is truly remarkable. This recognition on social media plays a pivotal role in bridging the digital divide, emphasizing the importance of social media as a tool for inclusivity and connectivity among students.

4. Employment Opportunities

- As we all know, the Industry-Academia academia gap is one of the major issues students are facing nowadays. In Spite of a student finishing his/her degree it's very difficult for them to get a job. Social media helps them to grab opportunities.
- Many companies **update about Internships & Job openings in their social media accounts.** Students following these companies on social media can apply by sending them their resumes. LinkedIn is one such social media platform where students apply for internships and jobs extensively.
- From Emertxe we have been working to contribute to this gap by offering Free Online Internship Programs in Embedded Systems and Internet-Of-Things (IoT). By making the internship hands-on and project driven we are able to reach **25000+ students from 70+ countries,** which is the testimony of the power of social and digital platforms.
- Social media offers numerous benefits and advantages for students, one of which is facilitating research about companies and various fields of interest. Students can access a wealth of information, including reviews and comments posted by others, to gain a comprehensive understanding of a company.
- Moreover, the importance of social media lies in its role in displaying ratings provided by users. Students can easily view and assess the authenticity of ratings for specific companies on social

media platforms. This not only aids in making informed decisions but also enhances their visibility.

- Additionally, students can proactively establish their presence on social media by confidently expressing their opinions and fostering positive relationships. This visibility provides an opportunity for students to showcase **their talents and expertise**, further underscoring the advantages of social media for students in today's interconnected world.

5. Social Media Marketing

- Let's talk about social media marketing, in our focus of top 5 benefits of social media for students. Students can promote any college festivals or activities using social media. Every college has a cultural fest every year. Students will have to promote their fest to ensure students from other colleges also participate. Hence, social media helps students to promote on a big platform.
- We can even have campus ambassador programs, where a student from each college represents the brand and promotes the brand via social media. Infact, At Emertxe, we offer an exciting one-month Campus Ambassador Program designed to empower students with marketing skills and promote our brand in their colleges.

Conclusion: Social media has now become a very crucial part of our personal and professional life. The growth of social media over the years has transformed how most users experience the internet. There have been diverse reactions from academics and researchers on the impact of social networks and how they affect academic performance. Hence, their academic performance must be managed well keeping in view all the factors that can positively or negatively affect their academic achievement. The students who are using the social media need to be monitored about their usage of these websites. Despite the fact that the Universities are banning the surfing of these websites in their campuses still there is a need to ban the third party software's which help students to access these websites. Social media significantly impacts education by providing students with valuable resources, fostering communication, and teaching digital skills. However, it also presents challenges such as potential distractions, mental health concerns, and time management issues. For students, balancing the benefits and drawbacks of social media is essential. By using social media wisely, students can enhance their learning experience while minimizing its negative effects. Teachers and school leaders play a crucial role in guiding students to make the most of these platforms responsibly and effectively. The importance of social media in shaping our communication landscape cannot be overstated. Its pervasive influence has fundamentally transformed the way we connect, interact, and express ourselves. Throughout this article, we've delved into the numerous advantages and benefits of social media, particularly from a student's perspective.

Social media serves as a multifaceted platform that significantly enhances learning, facilitates networking, and provides a powerful outlet for creative expression. Its global reach, coupled with its capacity to unlock employment opportunities and drive the engines of social media marketing, further emphasizes its indispensability in the modern world.

However, it's crucial to note that the benefits we've discussed here are just the tip of the iceberg. As these platforms continue to evolve, incorporating cutting-edge technologies such as artificial intelligence, students will find themselves immersed in a world of even greater potential. These

advancements hold the promise of inspiring and empowering students, fostering comprehensive growth and shaping them into well-rounded global citizens.

By embracing the opportunities presented by social media, students are not merely adapting to change but embracing a dynamic force that propels them toward a future where **connections transcend borders, opportunities are limitless, and personal and profess ional growth knows no bounds.** Looking ahead, it's evident that social media will remain an essential companion on the educational journey, facilitating self-discovery, and fostering achievement for students.

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EDUCATIONAL APPS AND MOBILE LEARNING

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Abstract

In recent years, application and use of digital technologies for learning has increased. Smartphone are now have become an integral part of learners. The popularity of smartphones devices is growing fast because of educational apps and mobile learning. Mobile learning has become increasingly popular, mainly due to Covid-19 pandemic that forced many schools to close and shift to online learning. This trend also led to mobile educational applications to support students, teachers and parents. In this paper will focus on the types, uses, advantages and disadvantages of educational apps and mobile learning.

Keywords: Smart phones, educational apps, Mobile, Tablets, Technology, Communication, Mobility, Internet.

Introduction: Education is a continuous process by which wisdom, knowledge and skills passed from one generation to the next. Educational apps and mobile learning are not only changing how students learn but also how teachers teach. Mobile apps have revolutionized device use. Apps powers cellphones and tablets. Mobile learning has become more popular, mainly due to the Covid-19 pandemic that forced many educational institutions to close and shift to online learning, which led to mobile educational applications to support students, teachers and parents.

Educational Apps: Nowadays, technological advancement is transforming the educational system. Constant increase in educational apps has proved to be the 3rd most well-known category of mobile apps. Statista report shows that education is the second most popular category in the Google play store and is responsible for 9.31 percent worldwide. The educational app is simply software that allows and facilitates virtual learning. Anyone can improve their skills. Education is the foundation and educational apps are a tool that helps, access new opportunities and advances.

Types of Educational Apps:

Khan Academy: Is a popular educational platform where students can learn math, science, computer programming, history and more subjects. It is one of the best apps for students. It provides free education for everyone. It offers personalized learning, practice tests, instructional videos and useful tools for parents and teachers.

Quizlet: an educational app featuring flashcards, stimulates memory during the learning process. It is a perfect platform for quizzes and tests for teachers and students. It helps students in developing knowledge in the areas of arts and humanities, languages, math, science and others.

Evernote: It helps in taking notes, capturing photos and getting handwritten notes, all available in this single app.

Google Docs: This educational app helps in editing text documents right in your web browser. It does not require any special software. Multiple people can work at the same time.

Kids Academy: One of the most innovative apps. Unique ways of learning by playing.

Google Classroom: Educational app is simple to use and encourage collaboration between students and teachers. In this, teacher can create a class, add students by name or send them a code to join. In this, student can see the assignments, massage and participate in discussions. It has over 150 million active users around the world. It reduces costs, improves security and saves time.

Prodigy: helps kids by providing a fun and engaging platform for learning math and English skills with the help of curriculum aligned games.

Duolingo: It helps in practicing speaking, reading, listening, building and writing to build grammar and vocabulary. It helps in improving real conversation. It is a fun free app for learning 40plus languages.

Advantages of Educational Apps:

Mobility and Portability: Regardless of location and time, easy to manage and can get educational programs by trained experts.

Improved User Engagement: E-Learning apps provide an excellent illustration of visuals. Educational apps are engaging and enjoyable to use.

Effective Communication: Mobile devices make it easy to create high-quality and fast interactions between the instructor and the student, which allows the educator to access the individual performance of each student.

Interactive Learning: Educational apps easily customized. These apps are rapidly becoming the most popular method of instruction for students because they permit them to study at their pace and comfort.

Online Study Material: E-Books made students' lives easy and accessible for students. Students can access many books in a single click. They are all available on internet. Like readymade notes, worksheets etc.

24/7 Availability: Educational apps are accessible 24/7 and there is no time boundation.

Improvement of Performance: The usage of interesting materials such as images and videos can complement the study focus outside of the classroom, which helps in the better grade and academic performance.

Disadvantages of Educational Apps: Software and Hardware Issues: Software compatibility issues, problem in updating a new version, system crashes which affects the mobile learning experience. Other issues like dust, device broken. Interruption: It causes distractions from other classes. Learners are adapt mobile users and can use their phones to do other online activities regardless of parental restrictions, which results distractions from studies. Required Internet Connectivity: Educational apps can cause in the areas where the internet is not as standard or lacking in internet connectivity. Lots of apps require internet connectivity to operate.

Mobile Learning: Mobile learning is also called as M-Learning, is a form of distance education or technology enhanced active learning where learners use portable device such mobile phones to learn anywhere anytime. It includes computers, MP3 players, mobile phones and tablets. It is convenient, accessible virtually anywhere. With the spread of Covid-19, most schools and corporate institutions started using mobile learning apps to educate students and employees. The concept of mobile were introduced by Alan Kay in the 1970s when he joined Xerox Corporations Palo Alto Research Center and formed a group to develop the "Dynabook" a portable and hands-on personal computer. Learners are expect to engage with these learning resources whilst away from the traditional learning classes. Through mobile learning, students and employees can enroll in coaching programs , watch video

lecturers and events and take right on their phones. Mobile learning is considered to be the ability to use mobile in learning process.

Types of Mobile Learning:

Microlearning: It helps people to get better and quick information. It breaks down large course materials into bite-sized modules, usually lasting between 2 and 10 minutes. In this mobile learners can take lessons when it is most convenient for them example Duolingo. It helps in sharing ideas and discussions.

Gamification: It includes leader boards, score tables, point based reward system. Solo Learn helps people learn coding and programming in different languages. It offers coding contest and challenges against other users. It increasing engagement and fun during lessons.

Video and Audio based Learning: It increase learners attention and increase information design platform. It covers subjects and they vary in length. Encourages learners to answer by short quizzes, flashcards and videos.

Text- Based Learning: It includes learning through PDFs, eBooks etc. In this student know when to start and when to stop. They can highlight important paragraphs example HubSpot makes videos on market related topics.

Visual Instructor-led Training: Or VILT is a virtual setting. It involves an instructor or pre-recorded video example Zoom-based training sessions, MOOC – based courses etc.

Virtual Reality (VR) Learning: It involves real life scenarios and work challenges for teaching process. In this learners uses headset and controllers to move around and interact in a 3D virtual setting that has stimulation of real-world machinery, tools and other trainee and instructor.

ADVANTAGES OF MOBILE LEARNING:

Accessibility: Learners can access these courses anywhere in the world. Help the creator reach a much wider audience.

Flexibility: Learners can complete the course at whatever time works best for them. They can learn at their own pace.

Motivation: Interactive quizzes and test in the form of games, encourage the students to make progress.

Current Content: They are online courses, having advantage of revision.

Engagement: M-learning is the best way to engage students. Duolingo has become the worlds most used app for leaning new languages.

Disadvantages of Mobile Learning:

Distractions: of social media notifications, ads, text messages and emails during lesson.

Lack of Social Interaction: It does not allow in-person interactions.

Poor Personalization: Students missed personalized feedback when they are enrolled in mobile learning courses.

Poor Technology: Some students still learn with the older tech, improper electricity, and unreliable internet access.

Challenges and Consideration:

Long screen timing.

Data privacy concern.

Lack of social interaction.

Isolated behaviour.

Underprivileged background lacking mobile learning.

Inaccessibility of Internet.

Unreliable electricity.

Use of old devices.

Conclusion: Rise of mobile apps in education brought drastic changes in education. Advancement of Educational apps and mobile learning made the education system easy, flexible and available. Size of school bags decreased. Student these days can learn, give test and get instant feedback. Educational apps breakdown the barriers and supporting students of all ages with new knowledge and skills. Students learn with interest and in an innovative way. Change is a rule of nature and every change face challenges, but the benefits of educational apps and mobile learning cannot be denied. Education through apps and mobile is growing, which leads to new and innovative method of teaching and learning.

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ROLE OF ARTIFICIAL INTELLIGENCE IN PERSONALIZED LEARNING

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Abstract

Artificial Intelligence (AI) transforms the educational landscape by enabling personalized learning experiences. Integrating AI in education is revolutionizing personalized learning by creating tailored educational experiences that adapt to individual student needs, preferences, and learning progress. This paper examines how AI facilitates personalized learning through adaptive learning systems, intelligent tutoring, and data-driven analytics that provide real-time feedback and customized content. Additionally, AI empowers educators by automating routine tasks, allowing them to focus on higher-order teaching activities such as critical thinking, problem-solving, and creative instruction. These AI-driven enhancements address significant challenges in education, including student engagement, differentiation in diverse classrooms, and scalable learning solutions. By analyzing current applications and identifying key challenges, such as data privacy and ethical considerations, this study highlights AI's potential to improve learning outcomes and drive innovation in personalized education. Future implications for AI in education are also discussed, particularly in fostering equitable, inclusive, and efficient learning environments.

Keywords: Artificial Intelligence, Personalized Learning, Learning Technologies

Introduction: Artificial Intelligence (AI) has emerged as a transformative force in education, enabling personalized learning that adapts to individual student needs, preferences, and progress. The National Education Policy 2020 (NEP 2020) in India recognizes the potential of AI in addressing the challenges of access to quality education and personalized learning pathways (Ministry of Education, 2020). This paper examines how AI is facilitating a shift from one-size-fits-all models to customized educational experiences through data-driven approaches, ultimately enhancing both teaching and learning outcomes.

Role of AI in Personalized Learning: AI applications in education are redefining personalized learning through adaptive learning systems, intelligent tutoring, and data-driven insights. Adaptive Learning Systems use AI algorithms to adjust the pace and content based on student performance, as seen in platforms like BYJU'S and Khan Academy, which tailor lessons to individual learning styles (Pane et al., 2017). BYJU'S is an educational technology platform that uses AI to offer personalized learning experiences for students. The platform analyzes student performance and adjusts the content and pace of lessons accordingly. For instance, if a student struggles with a math concept, BYJU'S will provide additional practice questions and resources tailored to that specific area. Intelligent Tutoring Systems (ITS) provide real-time feedback, guiding students in personalized ways that simulate one-on-one tutoring (VanLehn, 2011). Carnegie Learning offers a math curriculum that incorporates an intelligent tutoring system. The system provides real-time feedback to students as they work through problems, offering hints and explanations that mimic a human tutor. This helps students develop problem-solving skills while receiving immediate support. AI further supports personalization by analyzing large datasets to predict student challenges and suggest interventions through Data-Driven Analytics (Popenici & Kerr, 2017).DreamBox Learning is an adaptive math program for K-8 students that uses data analytics.

The platform collects data on student interactions and learning patterns, allowing educators to gain insights into student progress and areas needing intervention. For example, it can identify students who are falling behind in specific topics and suggest tailored resources for those students.

Higher-Order Teaching Activities Enabled by AI: AI frees teachers from routine tasks such as grading, attendance tracking, and generating basic assessments, allowing them to focus on higher-order teaching activities (Holmes et al., 2019). AI-powered grading systems quickly evaluate assignments, providing real-time feedback that enables students to learn from mistakes instantly (Luckin et al., 2016). AI also supports critical thinking and problem-solving by guiding students through complex challenges with real-time hints and explanations, enhancing creativity and collaborative learning environments (Khan, 2012).

Freeing Up Teacher Time with AI

1. **Automated Grading**

   AI systems streamline grading by automatically evaluating assessments:

   Objective Questions: Quickly grades multiple-choice and fill-in-the-blank tests, reducing grading time.

   Essay Evaluation: Automated tools assess grammar, structure, and content depth, providing instant feedback and freeing teachers from extensive essay grading.

   Instant Feedback: Students receive real-time feedback, enabling immediate self-correction and accelerating learning.

2. **Attendance Tracking**

   AI automates attendance management:

   Facial Recognition and Biometric Scanning: Streamlines attendance processes.

   Automated Reporting: Updates attendance records and generates reports to identify absenteeism patterns early.

3. **Basic Assessments**

   AI tools automate assessment processes:

   Adaptive Testing: Adjusts question difficulty in real-time, providing tailored challenges and instant feedback.

   Self-assessment Tools: Enables students to complete and automatically grade self-assessments, allowing for personalized pacing.

   Automated Question Generation: Creates quiz questions from course content, saving teachers time on test creation.

4. **Reporting and Data Management**

   AI enhances performance data analysis:

   Student Performance Analytics: Analyzes grades and engagement, identifying student trends without manual review.

   Automated Progress Reports: Generates summaries of student performance for parents, reducing the administrative burden on teachers.

Benefits of AI Automation for Teachers

By automating tasks like grading and attendance, AI enables teachers to focus on:

- **Creative Instruction**: More time for developing innovative, engaging lessons that foster critical thinking and creativity.
- **Personalized Learning**: Increased ability to tailor instruction to meet individual student needs, providing support and challenges as needed.
- **Student Engagement**: Enhanced opportunities for meaningful interactions, facilitating discussions and collaborative activities.
- **Curriculum Design and Innovation**: Greater focus on improving curriculum, exploring new teaching methods, and integrating technology in the classroom.

Challenges Addressed by AI in Education: AI addresses significant challenges such as student engagement, where adaptive platforms offer personalized learning experiences that maintain interest (Pane et al., 2017). Differentiation is another area, as AI tailors content to varied student abilities, ensuring all learners receive individualized support (Tomlinson, 2014). Scalability is achieved by automating personalized learning at scale, allowing institutions to cater to large student populations without sacrificing quality (Luckin et al., 2016).

Challenges and Considerations: Integrating AI in education raises important concerns around data privacy, as systems rely on extensive data collection for personalization (Williamson, 2020). To address these risks, robust data protection measures and transparency are critical. Another key issue is algorithmic bias, where poorly designed AI systems may perpetuate inequalities (Holmes et al., 2019). Finally, the evolving role of teachers must be carefully managed, ensuring that AI complements rather than replaces human oversight (Selwyn, 2019).

Future Directions and Implications: The future of AI in education holds vast potential, from AI-driven virtual classrooms to augmented reality (AR) experiences that create immersive learning environments (Popenici & Kerr, 2017). AI tutoring systems and predictive models are set to enhance lifelong learning, offering continuous personalized learning experiences beyond traditional classrooms (Khan, 2012). As AI evolves, ethical guidelines will be crucial to balancing innovation with privacy, equity, and inclusivity (Williamson, 2020).

Conclusion: The transformative power of AI in personalized learning lies in its ability to create individualized educational experiences that adapt to the needs, preferences, and pace of each student. AI-driven tools like adaptive learning systems, intelligent tutoring, and data-driven insights not only enhance learning outcomes but also allow educators to focus on higher-order teaching activities such as critical thinking and creativity. These innovations address significant educational challenges, including student engagement, differentiation, and scalability in diverse classrooms.

However, the widespread integration of AI in education also presents challenges, particularly concerning data privacy, algorithmic bias, and the evolving role of teachers. Addressing these issues will require robust ethical frameworks that ensure AI tools are transparent, equitable, and secure.

Future research should focus on mitigating biases in AI algorithms, improving data protection, and exploring AI's long-term impact on learning outcomes. As AI continues to shape the future of education, it is essential to balance innovation with ethical responsibility, ensuring that AI enhances learning for all students inclusively and equitably.

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THE ROLE OF EMOTIONAL RESILIENCE IN ADAPTING TO EMERGING EDUCATIONAL TRENDS: A STUDY OF B.ED. STUDENTS IN MYSURU DISTRICT

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Abstract

This study investigates the role of emotional resilience in helping B.Ed. students navigate new educational trends in colleges within the Mysuru district. Utilizing a validated survey tool developed by Yogesh under the guidance of Prof. N Lakshmi, the research comprises 58 items and involves a sample of 78 B.Ed. students. The focus is on assessing how emotional resilience impacts adaptability to emerging educational practices, such as online learning, collaborative teaching, and inclusive education strategies. Findings indicate that higher levels of emotional resilience are positively correlated with improved adaptability, engagement, and academic performance among B.Ed. students. Students demonstrating strong emotional resilience reported better coping strategies when faced with challenges associated with new educational trends. Additionally, supportive peer relationships emerged as a significant factor in enhancing emotional resilience, contributing to a more positive learning environment. These insights highlight the necessity of integrating emotional resilience training into B.Ed. programs, ensuring that future educators are better equipped to adapt to evolving educational landscapes. By fostering emotional resilience, educational institutions can enhance the overall preparedness of teacher candidates, ultimately benefiting their future students and the broader educational community.

Keywords: Emotional Resilience, B.Ed. Students, Educational Trends, Mysuru district, Teacher Education

Introduction: In the rapidly evolving educational landscape, teachers are expected to be not only knowledgeable but also adaptable to new trends and technologies. Emerging trends such as digital learning platforms, student-centric approaches, and flexible learning methodologies are reshaping the role of educators. These changes demand emotional resilience, which refers to the ability to adapt, recover, and thrive in the face of challenges. Emotional resilience is particularly crucial for B.Ed. students who are in the process of becoming future educators, as they need to navigate these changes while also dealing with the emotional and mental pressures of their own learning.

In Mysuru district, as in other parts of India, educational reforms and technological advancements are making it essential for B.Ed. students to develop resilience to succeed in the teaching profession. The ability to cope with the demands of new instructional strategies, digital pedagogy, and the diverse needs of students requires an emotionally strong and adaptable mindset. This study seeks to explore how emotional resilience aids B.Ed. students in Mysuru district in adapting to emerging educational trends.

Review of Literature

1. Emotional Resilience and Education

Several studies have highlighted the importance of emotional resilience in the educational context. Luthar et al. (2000) define emotional resilience as the capacity to bounce back from adversity while maintaining personal well-being. For educators, resilience helps in managing stress, maintaining work-life balance, and dealing with the emotional demands of students (Howard & Johnson, 2004). In the context of teacher education, emotional resilience is seen as a critical factor for developing coping mechanisms that are necessary for handling the increasing complexities of the teaching profession (Beltman, Mansfield, & Price, 2011).

2. Emerging Educational Trends

With advancements in technology and the shift towards more inclusive and student-centered pedagogies, there is growing pressure on educators to adapt. According to Brown and Adler (2008), the integration of digital learning tools, the emphasis on collaborative learning, and the move toward flipped classrooms are transforming the traditional roles of teachers. B.Ed. students are now expected to familiarize themselves with digital literacy, online teaching tools, and innovative methods for engaging diverse learners.

3. Emotional Resilience in B.Ed. Students

Studies specifically focusing on emotional resilience in teacher education programs highlight the need for resilience training as part of B.Ed. curriculums. A study by Richards, Levesque-Bristol, and Templin (2013) found that pre-service teachers often face emotional challenges, particularly during their practicum, and those with higher emotional resilience are better able to cope with the stresses of teaching practice. Similarly, Gu and Day (2007) emphasize the importance of emotional resilience in sustaining teacher commitment and well-being throughout their careers.

4. Impact of Resilience on Adaptation to Trends

Research indicates that emotional resilience plays a pivotal role in the ability to adapt to new trends in education. According to a study by Tait (2008), teachers who demonstrate higher levels of resilience are more likely to embrace new educational practices and technologies. This adaptability is crucial in a profession that is constantly evolving, particularly in response to policy changes, technological advancements, and societal expectations.

Objectives

* To assess the level of emotional resilience among B.Ed. students in Mysuru district.

* To explore the relationship between emotional resilience and adaptability to emerging educational trends among B.Ed. students.

* To identify the challenges B.Ed. students face in adapting to new educational trends.

* To suggest strategies for improving emotional resilience in B.Ed. students to better prepare them for adapting to modern educational environments.

Hypotheses

1. There is no significant relationship between emotional resilience and the ability of boys and Girls in B.Ed. programs to adapt to emerging educational trends.

2. There is no significant relationship between emotional resilience and the ability of B.Ed. students in **government and private** institutions to adapt to emerging educational trends.

3. There is no significant relationship between emotional resilience and the ability of B.Ed. students from **urban a**nd Rural areas to adapt to emerging educational trends.

4. There is no significant relationship between emotional resilience and the ability of **science and arts** students in B.Ed. programs to adapt to emerging educational trends

Methodology

Method and Procedure: The present paper follows the descriptive method of educational analysis. This study employed a survey approach and utilized the Emotional resilience and the ability Scale, which consists of 58 items developed by Yogesha K A and Prof. N Lakshmi. Data collection involved 78 B.Ed. students in the Mysuru district of Karnataka. Statistical techniques, including mean, standard deviation (SD), and t-test, were used for data analysis.

Sample: Samples of 78 B.Ed. students were chosen for the present analysis, evenly distributed across various demographics: 39 Boys, 39 Girls students, 39 rural student, 39 urban students, 39 science,39 arts and 39 Government,39 Private Institution students.

Tools for data collection: The Emotional resilience and the ability Scale, developed by Yogesha K A and Prof. N. Lakshmi, was administered to 78 randomly selected 78 B.Ed. students in the Mysuru district for data collection.

Statistical Techniques: Mean, standard deviation (SD), and t-test were utilized for data analysis.

Results and Discussion: The Emotional resilience and the ability Scale were applied to the sample teachers, and t-values were computed to assess Student teacher ability concerning gender, location, area and type of institution. The analysis was conducted in accordance with the stated hypotheses.

Hypothesis: 1

There is no significant relationship between emotional resilience and the ability of boys and Girls in B.Ed. programs to adapt to emerging educational trends.

Table No. 1:

Gender	N	Mean	S.D	t-value	Level of Significance
Boys	39	252.08	33.88	0.889	Not significant at 0.01 & 0.05 level
Girls	39	244.07	36.87		

The computed t-value (0.889) is less than the table value (2.58) at the 0.01 level and (1.96) at the 0.05 level of significance in Table No. 1. This indicates that, the emotional resilience and the ability does not significantly differ between Boys and Gils students. Thus, the null hypothesis is accepted at all levels of significance.

Hypothesis: 2

There is no significant relationship between emotional resilience and the ability of B.Ed. students in government and private institutions to adapt to emerging educational trends.

Table No. 1:

Gender	N	Mean	S.D	t-value	Level of Significance
Govt	39	242.03	35.87	0.884	Not significant at 0.01 & 0.05 level
Private	39	234.05	39.51		

The computed t-value (0.884) is less than the table value (2.58) at the 0.01 level and (1.96) at the 0.05 level of significance in Table No. 1. This indicates that, the emotional resilience and the ability of B.Ed. students in government and private institutions does not significantly. Thus, the null hypothesis is accepted at all levels of significance.

Hypothesis: 3

There is no significant relationship between emotional resilience and the ability of B.Ed. students from **urban a**nd Rural areas to adapt to emerging educational trends.

Table No. 3:

Location	N	Mean	S.D	t-value	Level of Significance
Urban	39	248.03	36.87	3.748	3.748 Significant at 0.01 & 0.05 level
Rural	39	216.05	34.51		

The computed t-value (3.748) is higher than the table value (2.58) at the 0.01 level and (1.96) at the 0.05 level of significance in Table No. 2. This indicates a significant difference in the resilience and the ability of urban and rural student teachers. Therefore, the null hypothesis is rejected at all levels of significance.

Hypothesis: 4

There is no significant relationship between emotional resilience and the ability of **science and arts** students in B.Ed. programs to adapt to emerging educational trends

Table No. 4:

Gender	N	Mean	S.D	t-value	Level of Significance
Science	39	238.52	31.09	0.785	Not significant at 0.01 & 0.05 level
Arts	39	241.93	33.86		

The computed t-value (0.785) is less than the table value (2.58) at the 0.01 level and (1.96) at the 0.05 level of significance in Table No. 1. This indicates that, the emotional resilience and the ability of **science and arts** students in B.Ed. does not significantly. Thus, the null hypothesis is accepted at all levels of significance.

Conclusion: This study highlights the crucial role of emotional resilience in helping B.Ed. students adapt to the rapidly evolving educational landscape. As emerging educational trends such as digital learning, student-centered approaches, and inclusive teaching practices become more prevalent, it is essential that future educators develop the emotional strength to cope with these changes. The findings of this research are expected to reveal that emotionally resilient students are better equipped to handle the stress and challenges associated with new teaching methodologies and technologies, ultimately enhancing their effectiveness in the classroom. By understanding the relationship between emotional resilience and adaptability, this study can provide valuable insights into the support systems and strategies needed to cultivate resilience among B.Ed. students. This, in turn, will prepare them to navigate the complexities of modern education, ensuring they are capable of meeting the diverse needs of their future students. The recommendations derived from the study will help educational institutions incorporate resilience-building initiatives within their teacher training programs, ensuring that B.Ed. graduates are well-prepared for the demands of the profession.

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ATTITUDE TOWARDS TECHNOLOGY AND ITS EFFECT ON STUDENTS' ACADEMIC PERFORMANCE OF SECONDARY SCHOOL STUDENTS

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Abstract

Some of the findings of this study are that over the last several years, the application of technology in education has become more vital to support the learning experiences as well as the consequences of learning in (Secondary) Schools. In such a scenario, when digital tools with platforms are being embraced in general, it becomes necessary to assess the students' perception towards this technology so that its efficacy on the student's performance can be judged. This proposed research aims at exploring how students; perceptions of technology influence their performance that is to say, to delineate the major aspects of effectiveness of technology-based learning in secondary education. The proposed research is going to base its central topic on the relation between the attitude of secondary school students towards the usage of technology and their performance. It has used face-to-face questionnaires and a study population of 100 students from high schools in Bengaluru City. To quantify the perception of students regarding technology, an attitude scale towards technology was designed and administered by the examiner. To get a quantitative measure of achievement, a record of the students' previous year performance was collected from respective schools. This study will therefore make use of the 't' test as well as the coefficient of correlation in testing out the results obtained and confirmed level of significance of 0.05 (5%) confidence level. Findings revealed that indeed there exists a significant relationship between attitudes toward technology among students and a higher level of achievement. However, the analysis of findings was not made immune to any dependency upon the type of management and gender of the respondents. It can represent access to technology, by whom and what disparities exist shows the differences in access to technology and its results on academic achievement and may indicate what could be done to ensure that students have equitable access to types of technology that may serve to enhance learning.

Keywords: Attitude, Technology, Academic Performance, Secondary School, Students.

1.   Introduction: Technology has developed in consequence in educational settings in recent years, affecting how students learn and interrelate with academic matters. Digital tools like e-learning platforms, educational applications with smart classrooms have changed the traditional classroom situation. It is dangerous to comprehend students' views toward these digital tools and how they influence academic achievement of students. This research looks at the connection between secondary school students' views and their attitudes about technology and their academic performance and it investigates how positive/negative attitudes toward technology influence students' academic performance, taking into account factors namely gender and school management style.

1.1   Academic Performance: Academic performance is the amount to which a student has met their educational goals, as assessed by examinations, standardized tests, school assignments and total marks. It is an imperative forecaster of a student's academic performance and shows the quality of the teaching as well as learning process. A student's academic achievement can be influenced by a variety of factors, including family participation, school management and personal personality such as

motivation. According to research, sex, school type (government or private) and other factors all have an impact on academic output. Kumar (2022) discovered considerable variations in academic achievement between boys and girls, as well as between students in government as well as private schools. Saikia (2022) also confirmed that female students in Assam outperformed their male colleagues, demonstrating the impact of sex on academic performance.

1.2   Attitude towards Technology: Attitudes toward technology be relevant to how people view and interrelate with technology in their every day lives. In the background of education, students' attitudes about technology include their feelings, beliefs and behaviours surrounding the usage of digital tools in learning circumstances. A positive attitude toward technology inspires students to contribute more vigorously in digital education platforms, potentially leading to enhanced academic performance. In distinguish, a negative attitude might confuse the use of technology in education, lowering overall the achievement. According to Joel (2023) & Mondal (2023), students have a normally good attitude toward technology, mainly at the higher secondary as well as secondary school levels. Joel (2023) exposed that secondary school students were very contented and positive about technology, which led to improved learning experiences. However, individuality like as gender and type of school management influences how school children perceive and use technology.

1.3   Relationship between Academic Achievement & Attitude towards Technology: The relationship of academic achievement with toward technology is a fundamental field of research, predominantly given the growing reliance on technology in education. Numerous investigations show that a positive attitude toward technology is connected with superior academic accomplishment. Students who are high acquainted with digital tools perform better academically since they easilly access informations, educational resources utilization more efficiently and participate in new learning strategies. The present examination of secondary school students in Bengaluru City corroborated this connection, enlightening a substantial positive relationship between students' attitude towards technology as well as academic performance. This finding is reliable with previous research, namely Vishwanatha & Begum (2023), who discovered a substantial relationship between students' technology usage as well as academic achievement. This connection is altered by various things. Gender has an important influence as Saikia (2022) confirmed that girls had a favourable positive attitude toward technology and achieve academically better. The school management style was also influences this dynamic, as private unaided schools commonly have better usage of technology, which improves students' academic achievement as contrasted to government/private aided schools. Overall, students' views towards technology have a main contact on their academic achievement. Nurturing positive attitudes along with providing fair access to digital technologies might help improve educational achievements, especially in underserved schools. The rising quantity of literatures on this topic, including studies by Joel (2023) and Mondal (2023) supports the thought that technology, when used with a optimistic attitude, recover academic success at the resulting level.

2.   Review of Related Literature

2.1   Introduction: The review of related literature is alienated into studies that center on academic accomplishment and those that scrutinize attitudes toward technology. This segment examines existing investigate to better appreciate the effects of technology and further factors on academic achievement of students.

2.2   Studies Related to Academic Performance: Vishwanatha & Begum (2023) evaluated secondary level students' study habits and their influence on academic achievement during the COVID-19 outbreak. Their findings   established a substantial academic performance gap between boys as well as girls, and a relationship positively between study habits as well as academic performance. Ranjan & Jajoo (2023) investigated enrollment, retention and academic performance in government and private schools and they discovered significant disparities between unusual school models in terms of student's retention as well as academic achievement. Kumar (2022) also investigated the influence of sex, school management as well as locale of schools on academic achievement of secondary level students from New Delhi. The examination also found considerable achievement discrepancies among boys and girls, and also between students from government and private schools. Saikia (2022) further investigated the relationship between sex and academic achievement, determining that female students outperformed boys in Assam State. Sheergugri, Kumar & Dar (2021) discovered considerable variations in academic attainment between students educating in government and private schools at Gwalior with girls outperforming than boys in both said type of schools.

2.3   Studies Related to Attitudes towards Technology: Mondal (2023) investigated students as secondary level views towards ICT in classroom teaching at schools in Paschim Medinipur District and the survey discovered relatively slight differences in attitudes between boys and girls. Joel (2023) examined the opinion of higher secondary students regarding technology and discovered that students were generally supportive about its practice in education. Khunyakari et al. (2008) examined the attitudes of children at middle schools toward technology, finding that sex influenced their perception of digital technologies.

2.4   Overview of Studies and Research Gap: Existing study suggests that sex, type of school and study habits all have a substantial influence on students' academic achievement, however, the connection between students' attitudes towards technology with academic performance has been examined less thoroughly. Furthermore, while sex and school type have been found to influence academic performance, their relation with technology attitudes is little understand. This learning tries to fill this gap by studying the relationship between attitude towards technology and academic performance, taking into account significant characteristics namely gender and school management type.

3.   Significance of the Study: This research is essential since the integration of technology in education at secondary education has become unavoidable, particularly in light of the COVID-19 epidemic, which has expedited the changeover to digital education. Understanding how students at secondary education level in Bengaluru city, India, perceive technology and its influence on academic performance could yield useful insights and these conclusion helps policymakers and teachers and school authorities develop ways for better integrating digital tools in the classroom setting. Furthermore, the research addresses inequities in access to technology depending on sex and school type resulting in more fair educational outcomes.

4.   Statement of the Problem:

"Attitude towards Technology and Its Effect on Students' Academic Performance of Secondary School Students"

This study seeks to evaluate the relationship between secondary school students' academic performance and their attitudes toward technology.

5.   Objectives

1. To examine the relationship between Academic Performance and Attitude towards Technology of secondary school students.
2. To assess the differences in the Academic Performance of secondary school boys and girls.
3. To find out the differences in the Academic Performance of secondary school students having unfavour, average and favour attitude towards technology.
4. To find out the differences in the Academic Performance of secondary school students educating in government, private aided and private unaided schools.

6.   Hypotheses

The following hypotheses guided the research:

1. There is no significant relationship between Academic Performance and Attitude towards Technology.
2. There is no significant difference in the Academic Performance of secondary school students having unfavour and average attitude levels towards technology.
3. There is no significant difference in the Academic Performance of secondary school students having average and favour attitude levels towards technology.
4. There is no significant difference in the Academic Performance of secondary school students having unfavour and favour attitude levels towards technology.
5. There is no significant difference in the Academic Performance of secondary school boys and girls.
6. There is no significant difference in the Academic Performance of secondary school students educating in government and private aided schools.
7. There is no significant difference in the Academic Performance of secondary school students educating in private aided and private unaided schools.
8. There is no significant difference in the Academic Performance of secondary school students educating in government and private unaided schools.

7.   Methodology: The present research aims at exploring how students; perceptions of technology influence their performance that is to say, to delineate the major aspects of effectiveness of technology-based learning in secondary education. The proposed research is going to base its central topic on the relation between the attitude of secondary school students towards the usage of technology and their performance. It has used face-to-face questionnaires and a study population of 100 students from high schools in Bengaluru City. To quantify the perception of students regarding technology, an attitude scale towards technology was designed and administered by the examiner. To get a quantitative measure of achievement, a record of the students' previous year performance was collected from respective schools. This study will therefore make use of the 't' test as well as the coefficient of correlation in testing out the results obtained and confirmed level of significance of 0.05 (5%) confidence level. The statistical analysis involved the application of the independent 't' test and Karl Pearson's Product Moment Coefficient of Correlation techniques using the SPSS package.

8. Data Analysis and Results

Table 1: Showing Correlation Results between Academic Performance and Attitude towards Technology scores of secondary school students.

Variables	N	df (N-2)	'r' value	Level of Significance
Academic Performance	100	98	0.508	*
Attitude towards Technology				

Significant at 0.05 level. (Table value is 0.195)

Table-1 shows that the computed 'r' value of 0.508 exceeds the table value of 0.195 at the 0.05 level of significance. As a result, the relationship between secondary school students' academic performance and their attitude toward technology was statistically significant at the 0.05 level of significance. As a result, the null hypothesis is rejected, and an alternative hypothesis is proposed: "There is a significant positive relationship between Academic Performance and Attitude towards Technology of secondary school students." It finds that secondary school students with a positive attitude toward technology had better academic achievement, and vice versa.

Table-2: Showing independent 't' test results on Academic Performance scores of secondary school students having unfavour, average and favour attitude levels towards technology.

	Number	Mean	Standard Deviation	't' value	Sig. Level
Unfavour	17	63.352	18.867	3.15	Sig. at 0.05 level
Average	74	78.324	11.171		
Average	74	78.324	11.171	4.67	Sig. at 0.05 level
Favour	9	88.444	5.198		
Unfavour	17	63.352	18.867	5.13	Sig. at 0.05 level
Favour	9	88.444	5.198		

Note: Table Value of 't' for df 89; 81; 24 is 1.99/2.06 at 0.05 level of confidence

The table shows that the computed 't' value of 3.15 is bigger than the table value of 1.99 (N=91, df=89) at the 0.05 level of significance. As a consequence, "there is a significant difference in the Academic Performance of secondary school students having unfavour and average attitude levels towards technology.." pupils with an average attitude toward technology (M=78.324) performed better academically than pupils with a negative attitude toward technology (M=63.352). As a result, the stated hypothesis-2 has been rejected and an alternate hypothesis accepted.

The resulting 't' value of 4.67 was found to be bigger than the table value of 1.99 (N=83, df=81) at the 0.05 level of significance. As a result, "there is a significant difference in the Academic Performance of secondary school students having average and favour attitude levels towards technology." Students who had a positive attitude toward technology (M=88.444) performed better academically than students who had an average attitude toward technology (M=78.324). As a result, the stated hypothesis-3 has been rejected and an alternate hypothesis accepted.

Furthermore, the resulting 't' value of 5.13 exceeds the table value of 2.06 (N=26, df=24) at the 0.05 level of significance. According to the study, "there is a significant difference in the Academic Performance of secondary school students having unfavour and favour attitude levels towards

technology..” pupils with a favorable attitude toward technology (M=88.444) performed better academically than pupils with a negative attitude toward technology (M=63.352). As a result, hypothesis-4 was rejected, and an alternative hypothesis was adopted.
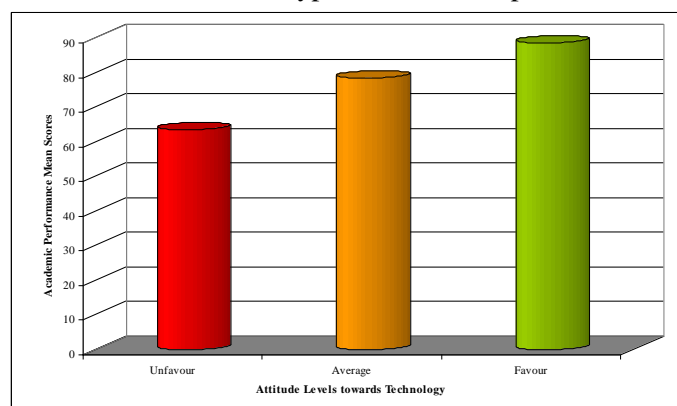
Fig.1: Comparison of mean scores on Academic Performance of the secondary school students having unfavour, average and favour attitude towards technology.

Table-3: Showing independent 't' test results on Academic Performance scores of secondary school boys and girls.

Gender	Number	Mean	Standard Deviation	't' value	Sig. Level
Boys	50	73.660	15.644	2.20	Sig. at 0.05 level
Girls	50	79.720	11.584		

Note: Table Value of 't' for df 98 is 1.98 at 0.05 level of confidence

The table shows that the computed 't' value of 2.20 is greater than the table value of 1.98 (N=100, df=98) at the 0.05 level of significance. As a result, "there is a significant difference in the Academic Performance of secondary school boys and girls." Secondary school girls (M=79.720) performed better academically than boys (M=73.660). As a result, hypothesis-5 was rejected, and an alternative hypothesis was adopted.
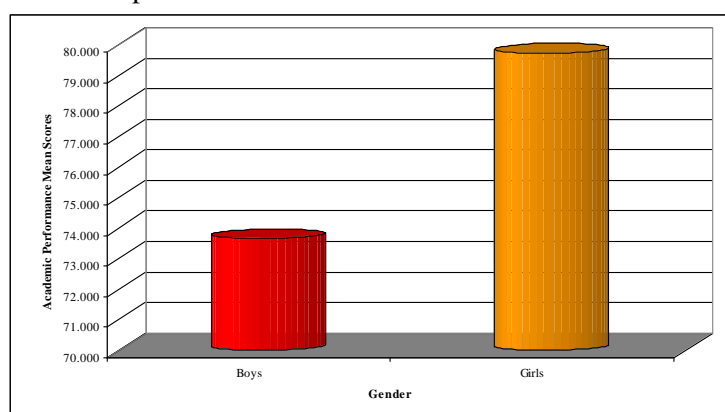
Fig.2: Comparison of mean scores on Academic Performance of the secondary school boys and girls.

Table-4: Showing independent 't' test results on Academic Performance scores of secondary school students educating in government, private aided and private unaided schools.

Type of Management	Number	Mean	Standard Deviation	't' value	Sig. Level
Government	33	71.151	15.270	1.34	Not Significant
Private Aided	33	75.878	13.277		
Private Aided	33	75.878	13.277	2.33	Sig. at 0.05 level
Private Unaided	34	82.852	11.089		
Government	33	71.151	15.270	3.58	Sig. at 0.05 level
Private Unaided	34	82.852	11.089		

Note: Table Value of 't' for df 64;65 is 2.00 at 0.05 level of confidence

The table shows that the computed 't' value of 1.34 is smaller than the table value of 2.00 (N=66, df=64) at the 0.05 level of significance. As a result, "there is no significant difference in the Academic Performance of secondary school students educating in government and private aided schools." Hence, the stated hypothesis-6 has been accepted.

The derived 't' value of 2.33 exceeds the table value of 2.00 (N=67, df=65) at the 0.05 level of significance. According to the study, "there is a significant difference in the Academic Performance of secondary school students educating in private aided and private unaided schools." Students from private aided schools (M=75.878) performed better academically than those from private unaided schools. (M=82.852). As a result, hypothesis-7 has been rejected and an alternative hypothesis accepted.

Furthermore, the derived 't' value of 3.58 exceeds the table value of 2.00 (N=67, df=65) at the 0.05 level of significance. According to the study, "there is a significant difference in the Academic Performance of secondary school students educating in government and private unaided schools." Students from private independent schools (M=82.852) performed better academically than those from government schools. (M=71.151). As a result, hypothesis-8 has been rejected and an alternative hypothesis accepted.
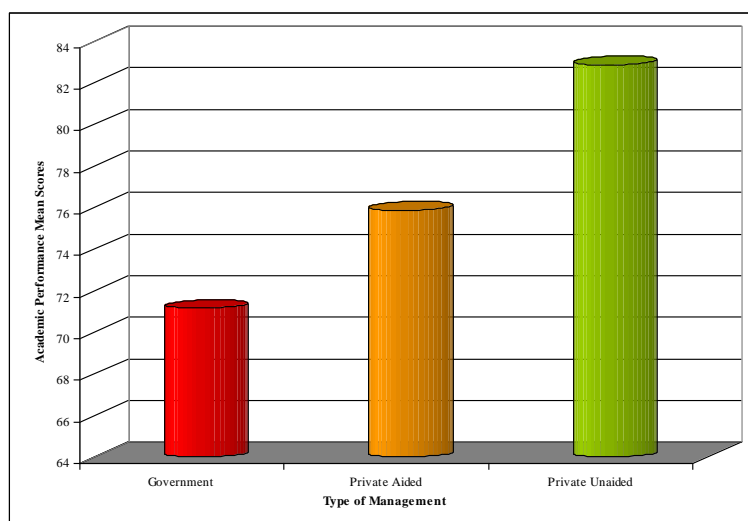
Fig.3: Comparison of mean scores on Academic Performance of the secondary school students educating in government, private aided and unaided schools.

9.   Major Findings

1. There was a significant positive relationship between Academic Performance and Attitude towards Technology of secondary school students.
2. There was a significant difference in the Academic Performance of secondary school students having unfavour and average attitude levels towards technology.
3. There was a significant difference in the Academic Performance of secondary school students having average and favour attitude levels towards technology.
4. There was a significant difference in the Academic Performance of secondary school students having unfavour and favour attitude levels towards technology.
5. There was a significant difference in the Academic Performance of secondary school boys and girls.
6. There was no significant difference in the Academic Performance of secondary school students educating in government and private aided schools.
7. There was a significant difference in the Academic Performance of secondary school students educating in private aided and private unaided schools.
8. There was a significant difference in the Academic Performance of secondary school students educating in government and private unaided schools.

10.   Discussion of Results: The study found a considerable positive relationship between students' attitudes toward technology and academic performance, which is alike with the findings of Joel (2023) & Mondal (2023), who exposed that favourable attitudes toward technology increase learning outcomes of school children. Students having positive views toward technology did improved academically than those with neutral or negative outlooks. Gender difference was also significant, with girls outperforming than boys, and this result consistent with previous study by Saikia (2022) as well as Kumar (2022). Furthermore, children from private unaided schools outperformed their counterparts in students from government and private aided schools, which supports by previous study output by Ranjan and Jajoo's (2023). However, the study discovered no significant changes in academic performance between children in government and private aided schools, implying that both type of schools/institutions provide equal educational experiences in technology.

11.   Conclusion: The examination show that students' views towards technology have a foremost influence on their academic performance. Students who had better attitudes towards technology perform better, highlighting the importance of instilling positive attitudes toward digital tools usage in schools and the present research also confirmed that gender gaps continue, with girls outperforming boys and also that school management effects academic performance, especially in private unaided school students.

11.   Educational Implications: This research has multiple educational ramifications and schools should invest in promoting favourable attitudes about technology and encourage to use digital tools by integrating it meaningfully into the school curriculum. Educator at secondary level must obtain enough training to get better their technology abilities and assist children in efficiently using digital tools and techniques. Efforts should be taken to decrease gaps in access to technology, particularly in government schools, so that every children benefit impartially. Finally, closing the gender gap in academic performance entails encouraging both boys and girls to be certain in using technology for learning.

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TRANSFORMATION WITH IOT CLASSROOM: A PARADIGM SHIFT

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Abstract

The effect of technology has caused many institutions to intend to change their approach to teaching and learning, resulting in the current model of teaching and learning being an active collaborative and self-directed one. Debatable topics like how to use technology in the classroom have therefore punctuated complaints about declining educational standards, unemployed learners, duplicate curricula, and archaic institutional structure. IoT in the classroom is like a new wave of change that has brought new opportunities and possibilities for the improvement of both teaching learning process and educational institutions infrastructure. IoT systems have tremendous potential to bring significant values to by engaging and motivating the students to increase speed of learning in the classroom. The purpose of this study is to find out the attitude of student teachers' towards creating IoT classroom. To achieve this aim, the researcher has chosen 150 samples from various teacher education institutions. The data were obtained through the google form and the respondents have filled actively. Further discusses the usefulness and transformation of IoT in the classroom. Moreover, it tries to present the smart learning environment with IoT in future education.

Key words: Transformation, IoT Classroom, Student Teacher, Paradigm Shift and Virtual.

Introduction: Evolution and Milestones of IoT in Education in the early 2000s, technological and connectivity developments prepared the way for integrating IoT in various areas, including education (Squire & Jan, 2007). From that point on, the historical development of IoT in education can be traced back. Using location-based augmented reality games on portable computers to improve scientific reasoning abilities was one of the first uses of IoT in education (Squire & Jan, 2007). Through the creation of narrative explanations of scientific occurrences, students were compelled to play these games, which encouraged scientific reasoning and debate (Squire & Jan, 2007). The advent of numerous IoT platforms, gadgets, and technologies in the years that followed gave the use of IoT in education further traction. For instance, an augmented reality game called Mad City Mystery was utilized to promote environmental science learning (Squire & Jan, 2007). Through augmented reality on portable devices, this program encouraged students to think critically about science and solve environmental problems (Squire & Jan, 2007). The necessity to educate students for a future society where various representations and scientific reasoning are crucial was the driving force for the incorporation of IoT in education (Squire & Jan, 2007). IoT integration in educational settings has become possible due to quick technological improvements, such as the widespread use of mobile phones and wireless communication (Sharples et al., 2016). A convergence between technological effects and educational methods resulted from the changing technology environment's impact on the time's educational ideas and practices (Sharples et al., 2016).   We're at the dawn of the age of the Internet of Things (IoT)

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enabled by network, Wi-Fi, IT security, cloud surveillance and software applications for learning. Deploying these solutions will not only help institutes save costs, but provide connected learning experience that will make it easier for higher education institutes to collaborate on research projects. Although these are early days, IoT is opening up a new world of educational opportunities, not limited by time and place, for students to learn more, and in new ways, by connecting to resources around the globe. It has been verified that, despite the interest of academics (Petrović et al., 2017) and the development of some research projects related to IoT in education (ELMrabet & Ait Moussa, 2017; Joyce et al., 2014; Lechelt et al., 2016), there is still a long way to go to understand the profound transformation that IoT can bring to teaching and learning, namely the exploitation of these technologies as a teaching resource (Lee, 2016).

Objectives of the study:
1. To find out whether there is any significant difference between the mean scores of male and female student teachers' attitude towards IoT classroom teaching.
2. To examine if there is any significant difference between the mean scores of male and female student teachers' perception towards IoT classroom teaching.

Study hypotheses:
1. There would be no significant difference between the mean scores of male and female student teachers' attitude towards IoT classroom teaching.
2. There would be no significant difference between the mean scores of male and female student teachers' perception towards IoT classroom teaching.
3. There would be no significant difference between the mean scores of attitude and perception towards IoT classroom teaching.

Materials and methods: The present study is qualitative in nature. The researcher has employed survey method to obtain the data from the respondent. 150 Samples were selected through simple random sampling technique from different B.Ed. colleges of Bidar city. Appropriate research tool was employed along with suitable statistical analysis.

Results & discussion:
1. There would be no significant difference between the mean scores of male and female student teachers' attitude towards IoT classroom teaching.

Gender	N	Mean	Std. Deviation	df	t	p-value	Remark
Male	52	13.31	1.936	149	4.567	.000	Sig. at 0.05 level
Female	98	14.40	.992				

Inspection of the table values depicts that, the obtained mean value of male score (M=13.31) found to be lesser than that of female (M=14.40). We can notice the difference here. Hence, the computed independent sample t test value is 4.567 with 149 degrees of freedom and the obtained p value is 0.000 which is much lesser than the required critical value at 0.05 level of significance. Therefore, the above stated null hypothesis can be rejected and restated as there is a statistically

significant difference between the mean scores of male and female student teachers' attitude towards IoT classroom teaching.

2. There would be no significant difference between the mean scores of male and female student teachers' perception towards IoT classroom teaching.

Gender	N	Mean	Std. Deviation	df	t	p-value	Remark
Male	52	11.94	1.883	149	0.994	.322	Sig. at 0.05 level
Female	98	12.26	1.807				

It is clear from the above obtained mean value indicates that the male score (M=11.94) found to be lesser than that of female (M=12.26). Hence, the computed independent sample t test value is 0.994 with 149 degrees of freedom and the obtained p value is 0.322 which is greater than the required critical value at 0.05 level of significance. Therefore, the above stated null hypothesis can be accepted and retained as there is no statistically significant difference between the mean scores of male and female student teachers' attitude towards IoT classroom teaching.

3. There would be no significant difference between the mean scores of attitude and perception towards IoT classroom teaching.

Variation	N	Mean	Std. Deviation	df	t	p-value	Remark
ATTITUDE	150	14.02	1.481	149	9.837	.000	Sig. at 0.05 level
PERCEPTION	150	12.15	1.833				

Inspection of the above table values depicts that, the obtained mean value of attitude score (M=14.02) found to be greater than that of perception (M=12.15). We can notice the difference here. Hence, the computed t test value is 9.837 with 149 degrees of freedom and the obtained p value is 0.000 which is much lesser than the required critical value at 0.05 level of significance. Therefore, the above stated null hypothesis can be rejected and restated as there is a statistically significant difference between the mean scores of attitude and perception towards IoT classroom teaching.

Conclusion: In conclusion, using IoT in education can potentially transform how people learn and teach. The results of case studies and success stories demonstrate how the Internet of Things benefits student performance, learning outcomes, and engagement. 2019 Kassab et al. Using IoT technology, educational institutions improve academic performance, increase student engagement, and offer tailored, adaptive learning experiences. However, there are still open research gaps and potential IoT adoption areas in education. Kassab et al.'s (2019) thorough literature assessment underlined the need for integrated and cogent opinions on IoT in education. The advantages and difficulties of IoT integration in specific disciplines and educational levels need more study. Also helpful to improve student outcomes, revolutionize teaching and learning processes, and improve the whole learning ecosystem. Further study is required to fill up the gaps in present knowledge and fully explore the possibilities of IoT in education. Educational institutions use the potential of IoT to build cutting-edge and productive learning environments by adopting new trends and technology.

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EXPLORES THE INTEGRATION OF VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR) IN CLASSROOM SETTINGS

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Abstract

Technology has become a necessary element of learning in the modern world as more education facilities adopt digital teaching methods, such as interactive whiteboards, class blogs and game-based teaching. In the near future, we expect most classrooms also to adopt virtual reality (VR) and augmented reality (AR) technology to simulate objects and environments, which will help children learn, as education is forecasted to be the 4th largest sector for VR investment by 2025.

This paper explores the integration of Virtual Reality (VR) and Augmented Reality (AR) in classroom settings, highlighting their potential to transform education. By creating immersive and interactive learning environments, VR and AR enhance student engagement, motivation, and learning outcomes. The key differences between VR and AR, including their applications and strengths, are discussed. The benefits, such as improved learning outcomes and enhanced engagement, are contrasted with challenges like cost, accessibility, and technical competency. Case studies exemplify successful implementations, while future trends suggest a significant impact on educational technology. The conclusion underscores the transformative potential of VR and AR in education, despite existing barriers.

Key Words: Virtual reality, Augmented reality, Accessibility, Technical competency and Educational Technology.

Introduction

Virtual Reality (VR) immerses users in entirely digital worlds through headsets, allowing for exploration, simulation, and gaming experiences that feel incredibly lifelike. It's widely used in sectors like gaming, educatio, and training, providing engaging ways to learn and develop skills.

Augmented Reality (AR) enhances our real-world experiences by overlaying digital information onto our surroundings. Using devices like smartphones or AR glasses, users can see graphics, sounds, and data superimposed on the physical world, enriching everyday activities. This technology finds applications in retail, healthcare, and navigation, among others.

Overview of VR and AR

The integration of Virtual Reality (VR) and Augmented Reality (AR) in educational settings represents a significant leap forward in teaching and learning methodologies. These technologies create immersive and interactive learning environments that can substantially enhance the educational experience. By merging real and virtual worlds, VR and AR offer unique opportunities to visualize complex concepts, engage in hands-on learning, and foster a deeper understanding of subject matter.

This paper reviewed the benefits and challenges of incorporating VR and AR into classrooms, illustrating how these tools can transform traditional educational paradigms. In recent years, educators and researchers have increasingly focused on the potential of Mixed Reality (MR), VR, and AR to enrich learning experiences. VR immerses students in entirely synthetic environments, enabling them to interact with computer-generated simulations that can replicate real-world scenarios or entirely fictional worlds. This technology has the potential to replace traditional, passive classroom experiences with dynamic and interactive learning sessions.

AR, on the other hand, overlays digital information onto the physical world, enhancing real-world interactions with virtual elements. This technology allows students to engage with digital content in a tangible context, thereby deepening their understanding and retention of information. The growing interest in VR and AR in education is driven by their ability to create engaging, motivational, and

empathetic learning environments. These technologies can cater to diverse learning styles, promote active learning, and provide immediate feedback, making them valuable tools for educators aiming to enhance student engagement and learning outcomes. Despite their potential, the widespread adoption of VR and AR in classrooms faces several challenges, including high costs, technical requirements, and the need for teacher training.

Addressing these issues is crucial for the successful integration of VR and AR into educational curricula. This paper examines the definitions, benefits, and challenges of VR and AR in educational settings. It also presents case studies and examples of successful implementations, providing insights into how these technologies can be effectively integrated into classrooms. By exploring future trends and implications, the paper aims to highlight the transformative potential of VR and AR in education and to identify strategies for overcoming the barriers to their adoption. Definition and Overview Virtual reality (VR) technology has grown considerably, and we expect it to revolutionize online education. VR immerses students in computer-generated worlds and could provide online educators with a replacement for the traditional sessile classroom experiences.

Key Differences:

	Virtual reality (VR)	**Augmented reality (AR)**
Definition	A computer-generated environment that simulates a real or imaginary world	A computer-generated environment that augments the real world with digital elements
Experience	Completely immersive, replacing the real world	Partially immersive, based on the user's view of the real world
Examples	Virtual field trips, simulated experiments	Interactive , textbooks, 3D models, historical artifacts
How it's used	Requires a headset	Can be used with headsets or on smartphones
Benefits	Can provide an engaging and experientiallearning environment	Can help students understand complex concepts, and can increase motivation
Soft skills development	Can help students develop communication, teamwork, problem-solving, and decision	

Benefits of Virtual Reality (VR):

✓ Enhanced Entertainment: VR creates captivating gaming and entertainment experiences, allowing users to explore new worlds and narratives.

✓ **Immersive Learning**: VR provides an engaging way to learn complex concepts through simulations and interactive environments, making education more effective.

✓ **Skill Development**: It allows for hands-on training in a safe environment, particularly in fields like medicine, aviation, and manufacturing.

✓ Therapeutic Uses: VR is increasingly used in therapy for conditions like PTSD, anxiety, and phobias, helping patients confront and manage their fears in a controlled setting.

✓ Remote Collaboration: Virtual environments can facilitate collaboration among teams separated by distance, making meetings and brainstorming sessions more dynamic and

interactive.

Benefits of Augmnted Reality (AR)

➢ **Enhanced User Experience**: AR enriches the real world with digital information, improving user interactions in various applications, from shopping to gaming.

➢ **Increased Efficiency**: In industries like manufacturing and logistics, AR can provide real-time data and guidance, streamlining processes and improving productivity.

➢ **Improved Navigation**: AR enhances navigation by overlaying directions and points of interest directly onto the user's field of view, making travel and exploration easier.

➢ **Interactive Marketing**: Brands can create immersive advertising experiences that engage customers, enhancing product discovery and interest.

➢ **Medical Applications**: AR can assist healthcare professionals by providing vital information during surgeries or procedures, improving accuracy and outcomes.

Challenges and Consideration

Challenges and Considerations of Virtual Reality (VR)

1. **Cost**: High-quality VR equipment, including headsets and powerful computers, can be expensive, limiting accessibility for many users.
2. **Motion Sickness**: Some users experience discomfort or motion sickness due to the disconnect between visual input and physical movement, which can affect usability.
3. **Content Creation**: Developing engaging and high-quality VR content requires significant time and expertise, which can be a barrier for developers.
4. **User Safety: Users can become disoriented or unaware of their surroundings while immersed in VR, leading to potential accidents or injuries.**
5. **Social Isolation: Prolonged use of VR can lead to feelings of isolation, as it separates users from their physical environment and social interactions.**

Challenges and Considerations of Augmented Reality (AR)

1. **Device Limitations**: AR often relies on smartphones and tablets, which may have limitations in processing power, battery life, and display quality.
2. **Environmental Factors**: AR experiences can be affected by lighting conditions, surface textures, and the user's physical environment, which may hinder usability.
3. **Privacy Concerns**: AR applications that utilize cameras can raise privacy issues, as they often collect data about users and their surroundings.
4. **Content Development**: Creating compelling and relevant AR content requires creativity and resources, which can be a challenge for developers.
5. **User Experience**: Ensuring a seamless and intuitive user experience can be complex, as users need to interact with both real and digital elements in a coherent way.

Future trends and implications

Education systems traditionally refused to accept technological changes and most of them still rely exclusively on the 'teacher in front of the kids' strategy. However, the time has come to embrace new teaching models, where virtual and augmented reality can play an important role.

Using AR tools or VR headsets, students will be able to experience learning in a completely new way. They can organize virtual field trips, visit historical places, conduct experiments, and test

a wide range of devices. VR and AR technologies add gamification elements to classical education, making the whole process more appealing and engaging. At the same time, learning becomes more inclusive, accessible, and affordable. Soon enough, AR gadgets will be so cheap that almost everyone can use them on a daily basis. But there are also a few side effects as well.

Too much of VR can isolate pupils and affect their socialization with other children. Additionally, professors will at least partly lose control over the teaching process. The technology still needs to acquire accreditation from state authorities to become fully operational. However, all these obstacles cannot change the fact that AR and VR will play an important role in the future of learning. VR and AR have the potential to revolutionize education by offering dynamic, interactive, and immersive learning experiences. While challenges exist, technological advancements and increasing accessibility steadily address these obstacles. As educational institutions explore the possibilities of VR and AR, finding the right balance between benefits and challenges will be crucial in shaping the future of learning.

Future Trends of Virtual and Augmented Reality

1. **Increased Accessibility and Affordability**

As technology evolves, VR and AR hardware is becoming more affordable and user-friendly. This trend will likely lead to broader adoption across industries and consumer markets.

2. **Enhanced Social Interaction**

Future VR experiences will focus on social connectivity, enabling users to interact with others in virtual environments. This could include virtual meetups, gaming, and collaborative workspaces, making remote interactions feel more personal.

3. **Improved Hardware and Software**

Advancements in processing power, graphics, and display technology will lead to more immersive and realistic experiences. Lightweight headsets with better resolution and comfort will enhance usability.

4. **Integration with AI and Machine Learning**

The integration of AI will enable more responsive and personalized experiences in both VR and AR. This could lead to smarter virtual environments that adapt to user behavior and preferences.

5. **Expansion in Education and Training**

VR and AR will increasingly be used in educational settings for immersive learning experiences. Training programs, particularly in fields like medicine, engineering, and emergency response, will leverage simulations to enhance skill acquisition.

6. **Health and Wellness Applications**

Both technologies will continue to be used in therapeutic contexts, including mental health treatments, physical rehabilitation, and wellness programs, helping users manage stress and anxiety through immersive experiences.

Conclusion: Virtual Reality (VR) and Augmented Reality (AR) are revolutionary technologies that are transforming how we interact with digital content and the physical world. Each offers unique benefits, from immersive learning and skill development in VR to enhanced user experiences and real-world applications in AR. However, both technologies also face significant challenges, including cost, user safety, and the need for compelling content. As they continue to evolve, it is essential for developers, businesses, and users to address these challenges thoughtfully. By focusing on user

experience, ethical considerations, and seamless integration, we can unlock the full potential of VR and AR, paving the way for innovative solutions across various sectors. Ultimately, these technologies have the power to reshape education, entertainment, healthcare, and beyond, creating richer, more interactive experiences that enhance our understanding and engagement with the world around us.

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AWARENESS ABOUT ARTIFICIAL INTELLIGENCE (AI) TOOLS IN EDUCATION AMONG THE B.ED. TRAINEES

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Abstract

Artificial Intelligence (AI) is taking over the world in most professional fields whether it is in medicine, engineering, security, business, or even in day-to-day household activity, AI is becoming a threat to people's jobs in different fields. The world wants a change towards betterment. Gen Z (1997-2012) and Gen Alpha (2013-2025) learners find learning challenging. They have less attention span (under extremely stressful conditions it is only 8-9 seconds) but their interest lies in innovation and digital usage. To make education an interesting and lifelong process, teachers should prepare the youth to meet the diverse national and global challenges for the present and the future. This study emphasizes the awareness of AI tools in education among the B.Ed. trainees. A survey has been conducted on B.Ed. trainees to give us an insight into whether they are aware of the enormous features that are provided by AI tools. Whether B.Ed. Trainees are ready to imbibe AI in their day-to-day education for learning or teaching, what are the different AI tools the B.Ed. trainees are aware of? And so on. Thus, this study will give us an understanding of the readiness of future teachers to inculcate AI in their classrooms.

Key Words: Artificial Intelligence, innovation, boon or bane, lifelong process, awareness, diverse challenges

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Introduction: Artificial intelligence (AI) has its roots in the early days of computing. Pioneers like Alan Turing and John McCarthy laid the foundation for AI research in the mid-20th century, exploring concepts such as machine learning and natural language processing. Over the decades, advancements in computer hardware, algorithms, and data availability have propelled AI to new heights, enabling it to perform tasks that were once thought to be exclusively human, such as recognizing speech, understanding images, and even driving cars. AI is reshaping industries and societies. The realm of education is no exception. As AI evolves, teacher educators find themselves at a crossroads: embrace this technological revolution or risk becoming obsolete. AI offers a plethora of opportunities to enhance the teaching and learning process (7). However, the integration of AI into education is not without its challenges. Teacher educators must navigate ethical considerations, such as privacy and bias, and ensure that AI is used to augment, not replace human interaction. Moreover, they need to develop the skills and knowledge necessary to effectively utilize AI tools and to prepare their students for a future where AI plays a central role. In conclusion, AI presents a tremendous opportunity for teacher educators to transform the teaching and learning landscape. By embracing AI and understanding its potential, teacher educators can equip their students with the skills and knowledge they need to thrive in a rapidly changing world. To do the above, the teachers need to first be aware of the AI tools that are available and imbibe them in their regular classroom teachings. In this study, a survey is conducted to find out whether the B.Ed. trainees are aware of AI tools in education.

Review of Related Literature –

1. Dr. Jayshree A. Bhagat (2024) conducted a <u>study on "</u>Attitude of B.Ed. Teacher Trainees towards the use of Artificial Intelligence in Education." The findings reveal that the Teacher trainees had positive attitudes towards the use of AI in Education. However, they were

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concerned about ethical issues regarding data security and privacy and some challenges for students and teachers.

2. Ana Maria C. Ventura* and Liezel S. Lopez. *Corresponding author (2024). They conducted a study on "Unlocking the Future of Learning: Assessing Students' Awareness and Usage of AI Tools" where the study reveals that the students are aware of the different AI tools as well as they use them in education. However, some students doubt the accuracy of AI-generated information, which may prevent them from using these tools.

3. Ferikoglu, D. & Akgun, E. (2022). An investigation of Teachers' Artificial Intelligence Awareness: A Scale Development Study. The study found that teachers in private schools generally know more about artificial intelligence (AI) than those in public schools. Older teachers may need more help learning about AI because it can be harder for them to process new information. Teachers with less experience often know more about AI than those with more experience. Teachers who study education technology tend to know the most about AI, followed by teachers in philosophy, chemistry, physics, and information technology. Teachers in special education, visual arts, and health sciences know the least about AI. The study suggests that teachers should learn more about AI starting in college and throughout their careers to be better prepared for the digital age.

Statement of the Problem

Awareness about Artificial Intelligence (AI) tools in education among the B.Ed. trainees.

Objectives:

1. To study awareness about AI tools among B.Ed. trainees (High/ Average/ low awareness)
2. To study awareness about AI tools among B.Ed. trainees with respect to their gender (Male, Female)
3. To study awareness about AI tools among B.Ed. trainees with respect to their streams (Arts, and Science)

Hypotheses:

1. There is no significant difference between High and Low awareness with respect to AI tools awareness among B.Ed. Trainees
2. There is no significant difference between males & females with respect to AI tools awareness among B.Ed. Trainees
3. There is no significant difference between Arts & science with respect to AI tools awareness among B.Ed. Trainees

Methodology: The researchers have used the Survey method to conduct the present study.

Population: All the B.Ed. colleges under Bangalore City University

Sample: The sample of the study consisted of 78 B.Ed. trainees of RV Teachers College, Bangalore.

Sampling Technique: Simple Random Sampling Technique was used by the researchers.

Data Collection Tool: Entitled awareness about AI tools among B.Ed. trainees developed by the researchers. The subject experts and language experts have established the content validity.

The 5-point Likert Scale (Strongly Agree, Agree, Neutral, Strongly Disagree, and Disagree) was prepared by the researchers to study the awareness about AI Tools in education among B. Ed. trainees.

Statistical techniques used - The statistical techniques used are Mean, SD, and t-test.

The awareness about AI Tools in Education among B. Ed. Trainees are obtained by administering a 5-point Likert scale prepared by the investigators having responses Strongly Agree, Agree, Neural, Strongly Disagree, and Disagree. An awareness scale consisting of 30 statements (29 positive and 1 negative) was considered. The obtained data was analyzed by computing Mean, Standard Deviation, and t value.

Table 1: Survey Questionnaire prepared by researchers

Sno.	Survey Questions	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1	I am aware that AI tools exist online	54%	36%	10%	0%	0%
2	I know about AI tools like ChatGPT	55%	35%	5%	5%	0%
3	I believe that to use the AI tool I would need a Gmail account	37%	36%	8%	18%	0%
4	I have been using the AI tool since they were launched	8%	12%	21%	42%	17%
5	I am familiar with the versions of ChatGPT-3.5, GPT 4, GPT 4o	4%	26%	33%	24%	13%
6	I know how to use different AI tools in education	9%	28%	32%	19%	9%
7	I acknowledge that the AI Tool is a large language model	19%	50%	10%	10%	3%
8	I recognize the availability of different AI tools like Meta AI, Gemini AI, and ChatGPT	27%	36%	19%	12%	4%
9	I know about a mobile app like Duolingo an AI app that helps in Language learning	32%	22%	12%	17%	17%
10	I realize the fact that AI tools have different personas	15%	28%	35%	14%	4%
11	I know that I can get a better response from AI tools with prompt engineering	31%	41%	21%	4%	3%
12	I recognize the fact most AI tools have limited features when they are used as free versions	29%	45%	17%	5%	3%
13	I am aware that AI tools can receive text, Audio, Images, and Video as input to generate responses	31%	33%	15%	17%	3%
14	I understand that the free version of ChatGPT's Knowledge is limited to September 2023	9%	23%	26%	31%	12%
15	I realize I can use Chat GPT 4o at the beginning of a conversation for a short duration	9%	27%	35%	19%	5%
16	I am familiar with AI tools that can be Educational Evaluation	10%	36%	23%	22%	9%

17	I am aware of the fact that Kamingo- an online learning App developed by Khan Academy	5%	13%	23%	32%	24%
18	I am informed of the fact that AI tools can regenerate the response as per your modified instruction/ by clicking on the Regenerate Option	15%	40%	26%	8%	12%
19	I have the knowledge that AI tools can be used to develop reasoning abilities among learners	14%	32%	28%	22%	3%
20	I am conscious of the fact that AI tools can respond in different languages	26%	41%	17%	10%	5%
21	I am aware that AI tools can give output like text, Audio, Image and Video	19%	36%	23%	18%	4%
22	I understand that AI knows how to do coding and can help in developing an app	6%	31%	24%	22%	15%
23	I realize the fact that I can have a private GPT- which does not send any information about my conversation to Google	4%	17%	26%	41%	13%
24	I recognize that AI tools are open source and I can download it and customize it as per my academic or personal needs with adequate training	18%	31%	15%	31%	4%
25	I recognize that AI tools are open source and I can download it and customize it and commercially use it to earn regular income	5%	22%	29%	27%	17%
26	I know the fact that AI Tools-like Chat GPT/ Gemini or Meta AI are trained with more that one hundred million books, journals and online information	17%	38%	31%	9%	4%
27	I understand that some of the AI tools are paraphrasing, spell check, and use a formal tone in Academic writing	26%	47%	9%	13%	4%
28	I realize that AI tools are used in almost all the different fields - Medicine, Architecture, Manufacturing, etc.	31%	40%	22%	4%	4%
29	I think AI tools will not foster creativity among learners	6%	18%	29%	24%	21%

30	I think AI tools use some random data over the internet and hence sometimes it may be biased	9%	28%	35%	23%	4%

In the above survey questionnaire, it can be seen that most of the B.Ed. Trainees are aware of AI Tools in Education and they show a positive attitude toward using AI tools in the future.

Analysis and Interpretation:

1. There is no significant difference between High and Low awareness with respect to AI tools awareness among B.Ed. Trainees
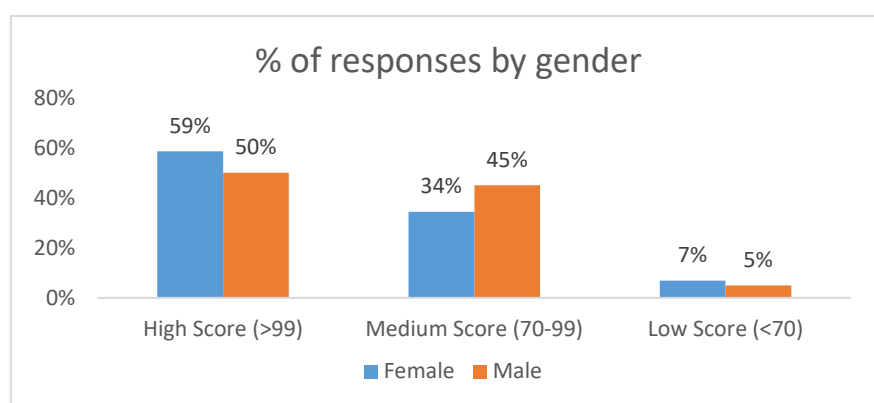
From the above chart, it is interpreted that females have better awareness about AI tools than males as 59% of the females have scored >99 whereas, 50% of males have scored >99. Most of the males scored between 70-99.

2. There is no significant difference between Male and Female students with respect to AI tools awareness among B.Ed. Trainees

	Gender	N	Mean	Std. Deviation	t-Value
AI Tools Awareness	Male Students	20	98.5000	15.67264	
	Female Students	58	100.206	15.71875	0.42

Table 1.1 Significant difference between Male and Female students concerning AI tools

The obtained t value is 0.42 which is less than the table value of 1.664 at 0.05 level of significance with the degree of freedom (d_f) 76 (N1+N2-2 = 76). Hence, the formulated hypothesis is accepted. There is no significant difference in the mean values of females and males with reference to AI tools awareness among B.Ed. Trainees.

3. There is no significant difference between Arts & science with respect to AI tools awareness among B.Ed. Trainees

	Gender	N	Mean	Std. Deviation	t-Value
AI Tools Awareness	Arts Students	42	97.4762	17.49	
	Science Students	36	102.4444	12.84	1.44

Average of survey score by stream
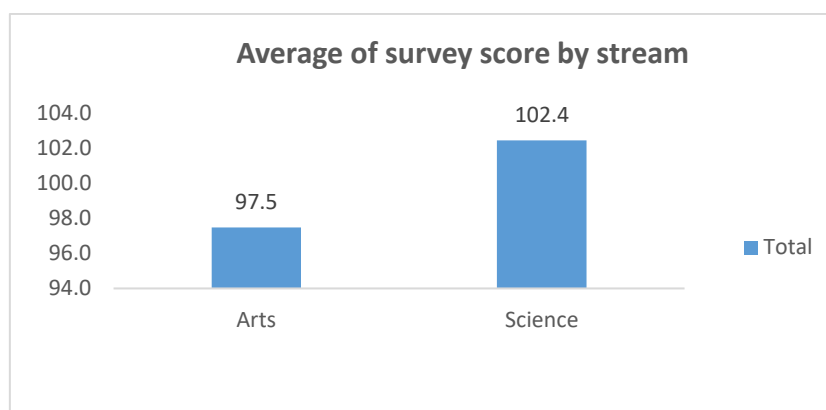
Interpretation: The obtained t value is 1.44 which is less than the table value of 1.664 at 0.05 level of significance with the degree of freedom (d$_f$) 76 (N1+N2-2 or, 42arts+ 36 Science -2=76). Hence, the formulated hypothesis is accepted. There is no significant difference in the mean values of Arts and Science B.Ed. Trainees with respect to AI tools awareness. In the above chart though Science B.Ed. Trainees' Mean score is slightly better than Arts B.Ed. Trainees, therefore, the null hypothesis is accepted.

Findings:
➢ There is no significant difference between Male and Female students with respect to AI tools awareness among B.Ed. Trainees.
➢ There is no significant difference between Arts & science with respect to AI tools awareness among B.Ed. Trainees

Conclusions:

A. *Summary of key findings-*

As artificial intelligence continues to revolutionize various industries, its impact on education is becoming increasingly evident. AI tools offer a plethora of opportunities for future teachers to enhance their instructional practices, foster personalized learning experiences, and prepare students for a technologically driven world. By leveraging AI-powered platforms, educators can gain valuable insights into student performance, identify areas for improvement, and tailor their teaching strategies to meet individual needs. Furthermore, AI can automate administrative tasks, freeing up teachers to focus on more meaningful interactions with their students. While the integration of AI in education presents challenges such as ethical considerations and potential biases, the benefits far outweigh the drawbacks. By embracing AI and developing the necessary skills, future teachers can position themselves as effective educators who are equipped to navigate the complexities of the 21st-century classroom.

In this present study, it was observed that the majority of the respondents are aware of AI tools and they show a favorable attitude toward learning AI tools and implementing in the education in the future as most of them believed AI tools can generate creativity among students.

B. *Limitations of the study –*
1. The present study was limited to B.Ed. Trainees only.
2. The present study was limited to Bangalore City University only.
3. The present study was limited to the awareness of AI Tools in Education only.

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CR Kothari and Gaurav Garg. *Research Methodology Methods and Techniques.*

THEME 2

THEME - 2

INNOVATING EDUCATION: FRAMEWORKS FOR FUTURE SKILLS AND COMPETENCIES

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Abstract

In today's rapidly growing world, the traditional standards of education face unprecedented challenges in adequately preparing individuals for the complexities of the future. The landscape of work and society is undergoing profound conversions driven by technological advancements, globalization, and socio-economic shifts, thereby necessitating a fresh perspective on the skills and competencies required by the workforce. It is within this active context that the concept of "innovative educational frameworks for future skills and competencies" develops as a pivotal area of consideration and development.

This article endeavours to delve into and showcase pioneering educational methodologies explicitly tailored to equip learners with the future skills and competencies indispensable for thriving in the 21st century and beyond. Recognizing that the mere transmission of information falls short, we advocate for an education system that fosters critical thinking, creativity, adaptability, collaboration, and above all, a lifelong learning mind-set. These "future skills" are not only imperative for professional success but also for active citizenship and personal fulfilment amidst an increasingly intricate world. Through an amalgamation of diverse perspectives and illuminative case studies, this article seeks to dissect how educators, policymakers, and stakeholders are reconceptualising education to meet the future's demands. From immersive project-based learning and competency-driven education to innovative interdisciplinary approaches and the integration of cutting-edge technologies, each concept will offer insights into promising strategies and frameworks poised to prepare students for the challenges and prospects of tomorrow. Additionally, this article underscores the significance of addressing equity, diversity, and inclusion within educational contexts. Confirming universal access to high-quality education, regardless of background or circumstance, is not only a moral imperative but also a cornerstone for nurturing a fairer and more successful society.

Key Words: Innovative, Educational Frameworks, Future Skills, Competencies and 21st century.

Introduction

In an ever-evolving world, the education system finds itself at a crossroads. Traditional methods of teaching are no longer sufficient to equip students with the skills necessary to thrive in an complex, technologically-driven society. Imagine a classroom where collaboration, creativity, critical thinking, and digital literacy are not just buzzwords, but the backbone of the curriculum. This isn't just a dream; it's a reflection of innovative educational frameworks emerging globally. This article will explore various innovative educational frameworks designed to cultivate future skills and competencies, the importance of each framework, and practical examples of their implementation.

The Need for Innovative Educational Frameworks

Today's students face challenges not present in previous generations. As globalization advances, technological innovations disrupt job markets, and information becomes more abundant, the need for a redefined educational approach is pressing. Traditional rote learning methods often fail to inspire critical thought or adaptability.

Skills for the Future

The landscape of employment is changing, and with it, the fundamental skills required by employers. According to the World Economic Forum, skills such as problem-solving, emotional intelligence, and creativity will dominate demand in the upcoming years. Thus, we must ask ourselves:

- How can we better prepare students for these changes?

- What educational methods nurture the skills necessary for future success?

Innovative Educational Frameworks

Frameworks that prioritize modern skills and competencies over conventional instruction are proving effective in various educational settings. Below, we highlight several notable frameworks that can redefine how students learn.

1. Project-Based Learning (PBL)

Project-Based Learning (PBL) shifts the focus from passive absorption of information to active engagement in real-world problems.

Key Features of PBL:

- **Real-World Connection**: Students work on projects that bear relevance to society, thereby fostering a sense of purpose.
- **Collaboration**: PBL emphasizes teamwork, requiring students to collaborate and leverage each individual's strengths.
- **Reflection**: This approach encourages students to reflect on their learning processes and outcomes, promoting deeper understanding.

Example of PBL in Action

One inspiring example occurred at a high school in New York where students partnered with local non-profits to address environmental issues in their community. By designing a campaign to raise awareness about recycling, students learned about sustainability while developing skills in organization, presentation, and teamwork.

2. Maker Education

Maker education builds on the principles of the maker movement, emphasizing learning through making. This hands-on approach encourages creativity while integrating essential STEM (Science, Technology, Engineering, and Mathematics) competencies.

Key Components of Maker Education:

- **Creativity and Innovation**: Students are empowered to design and create, allowing their imagination to flourish.
- **Problem Solving**: Projects tend to involve real-world challenges, compelling students to devise practical solutions.
- **Technological Fluency**: Making often involves using cutting-edge tools such as 3D printers, coding, and robotics.

A Case Study of Maker Education

A school in San Francisco implemented a maker space where students could experiment with robotics and engineering. Not only did this engagement lead to improved problem-solving skills, but students also developed confidence, presenting their projects to the community at a yearly showcase.

3. Social Emotional Learning (SEL)

Social emotional learning focuses on the development of emotional intelligence alongside academic skills. Understanding and managing emotions, setting positive goals, and fostering empathy are pivotal components of this framework.

Benefits of SEL:

- **Improved Academic Performance**: Students equipped with SEL skills often show better academic results.
- **Better Relationships**: Skills learned in SEL programs can enhance the quality of interactions with peers and teachers.

- **Mental Health**: SEL can mitigate issues such as anxiety and depression, fostering a healthier school environment.

Implementation of SEL

In an elementary school in Chicago, educators integrated SEL into the curriculum through daily mindfulness exercises and conflict-resolution workshops. As a result, teachers reported not only improved behavior in classrooms but also higher engagement from students.

4. Personalized Learning

Personalized learning tailors education to meet individual learner's needs, pace, and interests. This approach leverages technology to create a customized learning experience.

Characteristics of Personalized Learning:

- **Student Agency**: Learners are often given the freedom to make choices on how they learn and demonstrate their understanding.
- **Data-Driven Decisions**: Using technology, educators track student progress in real-time, allowing for timely interventions and adjustments.
- **Flexible Grouping**: Students may work in a variety of settings, including small groups based on shared interests or individual pursuits.

Success Story of Personalized Learning

One notable instance of personalized learning can be seen at a high school in Massachusetts where students use adaptive learning software. Each student follows a unique path, moving ahead as they master content rather than adhering to a rigid schedule. This has led to increased motivation and improved academic performance across diverse student groups.

5. Competency-Based Education (CBE)

Competency-Based Education focuses on measurable outcomes and skills rather than traditional grade-level progressions. Students advance upon demonstrating mastery of a subject, promoting an individualized approach to education.

CBE Framework Highlights:

- **Clear Learning Outcomes**: Each competency is clearly defined, allowing students to understand expectations.
- **Flexibility in Learning Paths**: Students can accelerate their learning as they prove their competence in specific areas.
- **Formative Assessment**: Continuous assessment provides feedback that is essential for growth and mastery.

Illustrative Example of CBE

A charter school in Denver implemented CBE, enabling students to progress through subjects at their own pace. This led to dramatic increases in student engagement and achievement, with many students expressing newfound confidence in their learning abilities.

Bridging the Gap: Teaching Methodologies for Future Skills

Alongside innovative frameworks, incorporating effective teaching methodologies is crucial. Let's delve deeper into methodologies that complement the frameworks discussed.

1. Flipped Classroom

In a flipped classroom, traditional lecture and homework assignments are reversed. Students learn new content at home (often through video lectures) and engage in activities that promote application during class time.

By inverting the traditional model, teachers can provide more personalized support during class.

2. Blended Learning

Blended learning combines traditional face-to-face instruction with online learning. This approach allows for flexible learning environments and can cater to diverse learning styles.

3. Gamification

Incorporating game design elements into learning (gamification) can enhance engagement and motivation. This methodology taps into students' natural inclination to play and challenge themselves.

Conclusion:

As we move further into the 21st century, the necessity for innovative educational frameworks that prepare students for future skills and competencies cannot be overstated. By adopting approaches such as Project-Based Learning, Maker Education, Social Emotional Learning, Personalized Learning, and Competency-Based Education, educators can cultivate an environment that empowers learners to succeed in a complex world. The future of education lies in moving away from rote memorization towards a dynamic learning landscape focused on critical thinking, creativity, and resilience.

In conclusion, educators and policymakers must recognize the importance of these frameworks and methodologies. Schools are not just institutions for knowledge; they should be training grounds for the leaders, innovators, and thinkers of tomorrow. By fostering skills that align with the needs of the modern world, we can ensure that the next generation is not just prepared for tomorrow but is poised to shape it.

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COMPARATIVE STUDY OF EFFECTIVENESS OF INQUIRY TRAINING MODEL ON CURIOSITY AMONG SECONDARY SCHOOL BOYS AND GIRLS

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Abstract

"Curiosity is the desire to acquire more information" which is demonstrated through questioning and exploration. This inclination is linked to various positive educational results in young people, such as academic success, active participation in school, and enhanced learning. However, studies show that many educators fail to nurture curiosity among students, possibly because of a lack of teaching methods that focus on sparking curiosity. Some scholars propose teaching questioning directly as a way to foster curiosity in students, though few research studies have explored the impact of questioning on enhancing curiosity. The present study aimed to explore the efficacy of inquiry training model on curiosity and academic achievement in science among secondary school students. The investigator has adopted quasi-experimental design to carry out the experiment with the chosen variables. To achieve this samples (80) of secondary school students were selected through purposive sampling technique. The research instruments like self-structured curiosity scale, achievement tests and the lesson plans were employed. The obtained data were analysed systematically with the appropriate statistical techniques. The outcomes of the study were analyzed, discussing their implications for science education and future research. These findings will support more detailed investigations into how curiosity and interest can predict learning outcomes in science.

Key words: *efficacy, inquiry training model (ITM), science, curiosity*

Introduction:

The core focus of science education is to enhance learners' senses, nurturing their curiosity to explore and understand the environment. Singh (1995) describes inquiry as a disciplined process of questioning, crucial for scientific exploration. By guiding learners to investigate and solve complex problems or phenomena, their minds are directed towards scientific inquiry. Models like the Suchman Inquiry Training Model aim to cultivate students' intellectual strategies in problem-solving and inquiry, emphasizing exploration, questioning, and discovery. Emphasizing the process of discovery, activities like observing, comparing, and predicting are fundamental science skills that develop students' scientific understanding. The development of science process skills not only aids in understanding and discovery but also enhances Curiosity among the Students irrespective of Gender.

Objectives of the Study

1. To study the effect of Inquiry training model on the curiosity among secondary school Boys and Girls.

Hypothesis of the Study

1. There is a significant difference between the mean values of Pretest and Post test Scores of Curiosity among the Boys and Girls of experimental Group.

2. There is a significant difference between the mean values of Pretest and Post test Scores of Curiosity among the Boys and Girls of Control Group.

Materials and methods:

The present study is quasi experimental in nature with non-equivalent groups. The investigator has employed randomized pre-test post-test group design. The samples were selected through purposive technique from 2 secondary schools of Shikaripura taluk.. The curiosity scale was developed by the investigator with certain dimensions like puzzling situation, inquiry, adventurous, inquisitive attitude, tolerance, and patience and happy to explore. This scale has been utilized for the present study. Preparation of inquiry training model (lesson plan) was developed with the use of text contents prescribed for 9th standard physics state text book. The obtained data were analysed systematically with the help of appropriate statistical techniques.

Results

H$_1$: There is a significant difference between the mean values of Pretest and Post test Scores of Curiosity among the Boys and Girls of Experimental Group.

Table shows the mean pretest & posttest scores of curiosity among Boys & Girls

Variation	Gender	N	Mean	SD	df	t-value	p-value	Hypothesis supported
Pretest	Boys Girls	22 18	172.86 175.59	15.487 9.262	39	.744	0.465	No
Posttest	Boys Girls	22 18	170.06 171.11	13.392 9.411		.320	0.753	

Note: *Significant at 0.05 level

The above paired sample 't' table 4.14 describes that, the pretest mean scores of Curiosity reference to gender, where N=40, (M=172.86 is equal to 175.59, SD=15.487& 9.262) while posttest mean scores were (M=170.06<171.11, SD= 13.392 & 9.411) of both the groups which greatly differs with 39 degrees of freedom and the obtained t-value is 0.744 & 0.753 and the p-value is 0.465 is greater & 0.753 is greater than the critical or required value at 0.05 level of significance.

Inference: Thus, it can be concluded that the above stated alternative hypothesis is rejected and restated as there is no significant difference between the pretest & Posttest mean Scores of Curiosity of the Experimental Group with reference to gender.
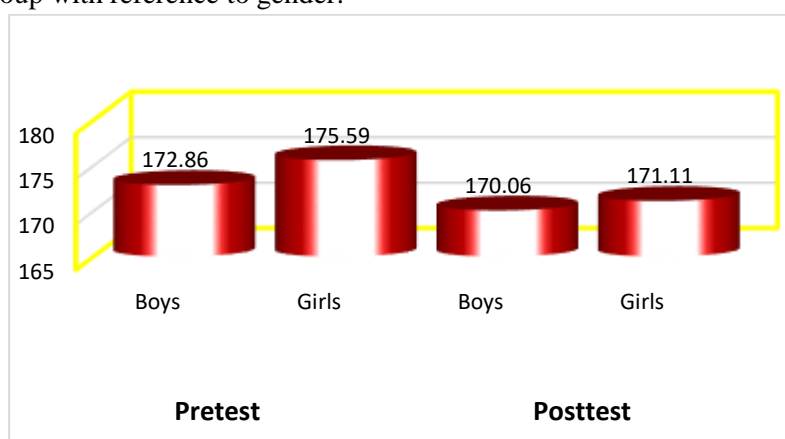
Bar graph: shows the mean pretest & posttest scores of curiosity of Experimental Group

H$_2$: There is a significant difference between the mean values of Pretest and Post test Scores of Curiosity among the Boys and Girls of Control Group.

Table: shows the mean pretest & posttest scores of curiosity among Boys & Girls

Variation	Gender	N	Mean	SD	df	t-value	p-value	Hypothesis supported
Pretest	Boys	22	145.83	14.869	39	.485	0.634	No
	Girls	18	143.11	16.051				
Posttest	Boys	22	146.44	14.790		.927	0.367	
	Girls	18	151.28	16.966				

Note: ***Significant at 0.05 level**

The above paired sample 't' table reveals that, the pretest mean scores of curiosity with reference to gender where N=40, (M=145.83 is equal to 143.11, SD=14.869 & 16.051) while posttest mean scores were (M=146.44 is almost equal to 151.28, SD= 14.790 & 16.966) of both the groups which greatly differs with 39 degrees of freedom and the obtained t-value is 0.485 & 0.367 and the p-value is 0.634 & 0.367 are greater than the critical or required value at 0.05 level of significance.

Inference: Thus, it can be concluded that the above stated alternative hypothesis is rejected and restated as there is no significant difference between the pretest & posttest mean scores of curiosity among the Control Group with reference to the gender.
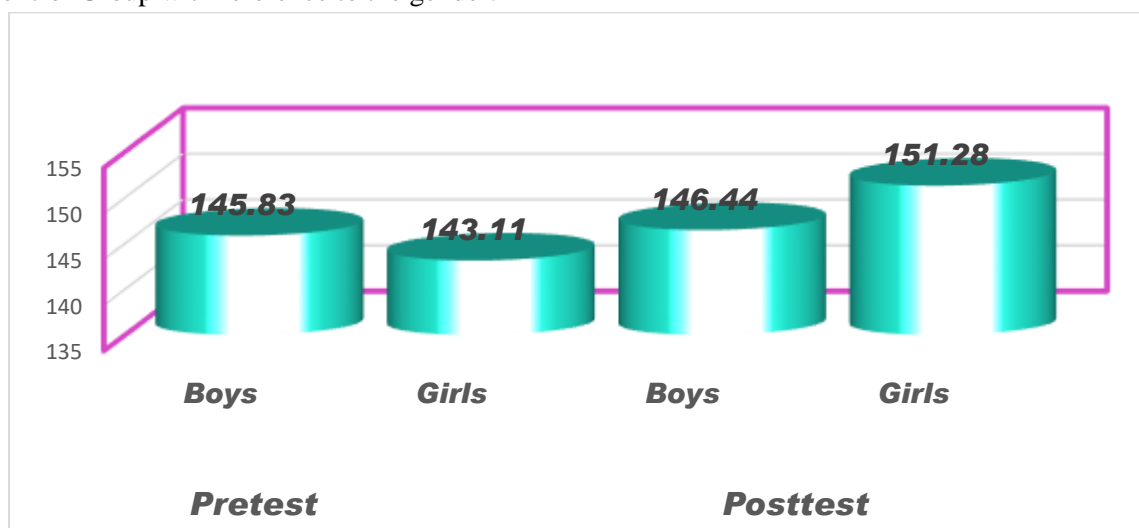
Bar graph: shows the mean pretest & posttest scores of curiosity of Control Group

Discussion:

The results of the present study reveals that there is a significant difference of post-test mean scores of curiosity among boys and Girls of control and experimental group when taught through inquiry training model approach and it is found evident from the previous studies. The studies viz., Pandey, A., Nanda, G. K., and Ranjan, V. (2011) found that using the Inquiry Training Model for teaching physical science is more beneficial than the Conventional Method in developing curiosity. The research outcomes suggest that shifting towards an activity-based and interactive approach in regular science classes can positively enhance students curiosity.

Conclusion:

. The Inquiry Training Model has been successful in sparking curiosity in students, enhancing their understanding of concepts, fostering interest, and encouraging active participation through questioning and interaction in the classroom. The study's findings indicate that shifting traditional

science teaching to be more activity-based and interactive will undoubtedly have a positive impact on students' learning outcomes.

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GAMIFICATION OF EDUCATION: ITS FUTURE AND IMPLICATIONS ON HIGH SCHOOLS IN TAMIL NADU

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Abstract

Gamification has become a widely used strategy in education to enhance student engagement, motivation, and academic success. This study examines both the benefits and challenges of applying gamification in Tamil Nadu's high school education. By incorporating game-based features like points, leaderboards, and rewards into the learning process, gamification aims to create a more dynamic and interactive classroom environment. However, several obstacles, such as limited technological resources, insufficient teacher preparedness, curriculum misalignment, and cultural views on gaming, complicate its integration in Tamil Nadu's schools. Using both qualitative and quantitative methods, the research identifies key factors that influence the effective implementation of gamification in the region. While the results highlight advantages such as increased student participation and personalized learning, they also reveal major challenges, including resistance from teachers, inadequate training, and a technology gap between urban and rural areas. The study provides practical recommendations for policymakers, educators, and other stakeholders to address these barriers, promoting a more innovative, student-focused approach to education in Tamil Nadu.

Keywords: Gamification, Motivation, High schools, Tamil Nadu, Leaderboard, Interactive Classroom Environment

Introduction: In recent decades, the education system in Tamil Nadu has experienced substantial changes, primarily driven by enhanced access to technology and a greater emphasis on digital literacy. While there have been notable improvements in student enrollment and educational infrastructure, challenges such as disengaged students, excessive reliance on rote memorization, and insufficient incorporation of practical skills in the high school curriculum continue to hinder progress. These challenges have prompted educators and policymakers to explore innovative strategies to improve learning outcomes. One such strategy that has garnered significant attention is gamification. Gamification refers to the incorporation of game-design elements such as point systems, leaderboards, badges, and rewards into non-gaming environments like education. The objective is to boost student engagement, increase motivation, and develop critical thinking and problem-solving skills.

This paper aims to examine the future prospects of gamification within Tamil Nadu's high school education system. It will explore how gamification can be integrated into the existing educational framework and analyze its potential long-term effects on students, teachers, and the overall educational structure. The intersection of technology and education has enabled the development of innovative teaching methodologies, with gamification emerging as a particularly effective approach for enhancing student involvement. By incorporating game-based elements such as points, badges, leaderboards, and interactive challenges, gamification creates a more dynamic and engaging learning environment.

This trend is gaining momentum in Tamil Nadu, where educational reforms increasingly prioritize the integration of information and communication technology (ICT) into conventional

teaching practices. The National Policy on ICT in School Education (2012) underscores the importance of ICT in fostering digital literacy, enhancing learning through technological tools, and preparing students with the necessary skills for success in a competitive global job market. In Tamil Nadu, integrating ICT into school curricula is viewed as essential for transforming the educational landscape. This paper investigates the potential for gamification, supported by ICT, to revolutionize high school education in Tamil Nadu.

Understanding Gamification in Education: A Research Perspective on Tamil Nadu: Gamification in education involves the integration of game design elements and mechanics into non-gaming environments, particularly in educational settings, to improve student engagement, motivation, and learning outcomes. By incorporating features such as competition, rewards, and challenges, gamification creates a more interactive and dynamic learning experience. This approach is particularly significant in the context of Tamil Nadu, where educational reforms are increasingly focused on implementing technology-driven innovations to address longstanding challenges in the high school curriculum.

Key Components of Gamification in Education

1. **Points and Rewards**: A core aspect of gamification is the assignment of points as a metric for task completion and achieving learning objectives. Students earn points as they successfully complete assignments or solve problems, with rewards such as badges, certificates, or other forms of recognition enhancing motivation. In Tamil Nadu, where issues such as student disengagement and the prevalence of rote learning persist, the introduction of point-based reward systems can shift the learning experience towards a more goal-oriented and satisfying process, stimulating intrinsic motivation.

2. **Levels and Progression**: Gamification structures educational content into distinct levels, enabling students to progress through material in a sequential manner. This system mirrors the progression model found in video games, where players advance only after mastering each level. In the context of Tamil Nadu's high school system, this method can encourage mastery-based learning, wherein students thoroughly comprehend one concept before moving on to the next, thereby fostering deeper understanding and retention of subjects.

3. **Leaderboards**: Leaderboards rank students based on their performance, fostering a sense of competition and encouraging continuous improvement. In Tamil Nadu, leaderboards can serve as a visual indicator of student progress, motivating learners by highlighting their achievements in relation to their peers. Furthermore, this competitive element, balanced with cooperative learning practices, ensures that the educational experience remains collaborative, thus supporting a holistic learning environment.

4. **Quests and Challenges**: Gamified education transforms learning tasks into quests or challenges that encourage problem-solving, creativity, and critical thinking. This approach directly addresses the issue of rote memorization prevalent in Tamil Nadu's education system by fostering active engagement with the learning material. By pushing students beyond their comfort zones, these challenges cultivate innovative thinking, aligning with the broader educational goal of fostering critical analysis and problem-solving skills.

5. **Instant Feedback**: One of the key benefits of gamification is its ability to provide immediate feedback. Traditional educational systems often delay feedback, reducing its impact on the learning process. In a gamified environment, students receive real-time feedback on their

performance, allowing them to correct mistakes and adapt their approach promptly. This immediacy is particularly beneficial in Tamil Nadu, as it can help students track their progress, correct misconceptions early, and maintain higher levels of engagement throughout the learning experience.

Game based Learning vs Gamification: While often misunderstood as synonymous, gamification and game-based learning are fundamentally different pedagogical approaches. **Game-based learning (GBL)** utilizes games as the primary medium for educational instruction, where the gaming environment itself plays a crucial role in facilitating learning through engaging and immersive experiences. For example, a video game that reenacts a historical event can function as the key educational resource for teaching history, compelling students to actively interact with the historical context and navigate decision-making scenarios within the game. In contrast, **gamification** refers to the incorporation of game mechanics such as points, leaderboards, and achievement badges into traditional educational activities. Unlike GBL, in which the game serves as the instructional method, gamification enhances existing educational structures by embedding these game elements to boost student motivation, engagement, and participation in standard learning tasks. The main goal of gamification is to harness the motivational features found in games, such as competition, rewards, and challenges, to increase student involvement in conventional educational activities without converting the content into a game format.

Current Challenges in High School Education: While the potential advantages of gamification in education are widely recognized, several critical challenges must be addressed to ensure its successful integration within Tamil Nadu's educational framework. These challenges include infrastructural and technological constraints, teacher readiness and acceptance, and the need for revised assessment methodologies that align with the skills gamification promotes.

Infrastructural and Technological constraints: Despite the potential benefits of gamification, inadequate information and communication technology (ICT) infrastructure remains a significant impediment. In Tamil Nadu, over 70% of classrooms lack the essential technological resources required for the implementation of gamified learning tools. This issue is particularly pronounced in rural areas, where limited internet connectivity and access to digital devices further restrict the adoption of technology-driven educational reforms. If these infrastructural deficits are not addressed, the implementation of gamification will remain limited, perpetuating the urban-rural divide in terms of educational access and quality.

Teacher training and Acceptance: A major barrier to the effective implementation of gamification in Tamil Nadu is the reluctance of educators to embrace this new pedagogical approach. Many teachers are unfamiliar with gamified learning platforms and the use of ICT tools in the classroom, leading to a hesitancy in adopting these methods. The *Report of the Committee for Evolution of the New Education Policy* (2016) emphasized the need for educators to transition from traditional information providers to facilitators of student-centered learning, which encourages independent problem-solving and self-directed learning. To facilitate this shift, comprehensive professional development and teacher training programs are essential. These initiatives must equip educators with the necessary skills, knowledge, and confidence to effectively integrate gamification into their teaching practices.

Assessment and Evaluation: Traditional assessment methods, which focus primarily on content retention and standardized testing, may not adequately capture the full spectrum of benefits that gamification fosters. The skills promoted by gamification such as critical thinking, collaboration,

creativity, and problem-solving are often overlooked by conventional evaluation systems. To fully harness the potential of gamified learning, new frameworks for assessment need to be developed. These frameworks should be designed to evaluate not only content knowledge but also the broader competencies and soft skills that gamification cultivates. This shift will enable a more holistic approach to assessing student progress and learning outcomes.

Persistent Challenges in Tamil Nadu's High School Education system: Despite progress in expanding access to education, Tamil Nadu's high school system continues to face several entrenched challenges. Rote learning remains prevalent, with a strong emphasis on memorization rather than critical thinking or comprehension. Student disengagement and a lack of motivation, particularly in rural areas, contribute to high dropout rates. Furthermore, many classrooms remain teacher-centric, limiting opportunities for active student participation and collaboration. The digital divide exacerbates these issues, as urban schools generally have greater access to technological resources, while many rural schools face infrastructure deficits, leading to unequal learning opportunities.

Opportunities for Technology Integration and Gamification: Tamil Nadu has taken proactive steps to introduce digital tools in classrooms, with initiatives aimed at enhancing digital literacy and integrating technology into the curriculum. However, these efforts have predominantly been concentrated in urban areas, and the quality of implementation varies significantly across schools. As smartphone and internet penetration increase across the state, gamification offers a promising opportunity to leverage these technologies to improve student engagement. By addressing the challenges related to infrastructure, teacher readiness, and assessment, gamification can play a pivotal role in transforming the educational landscape in Tamil Nadu, making learning more interactive, inclusive, and effective.

Potential for Gamification in Tamil Nadu's High Schools: Gamification involves incorporating game-like elements into non-gaming settings, and when applied to education, its goal is to make learning more engaging and immersive. According to Deterding et al. (2011), the appeal of gamification lies in the psychological rewards games provide, such as feelings of accomplishment and recognition. This method taps into students' intrinsic motivation, fostering a sense of achievement and encouraging active participation in learning activities. In Tamil Nadu, the School Education Department is increasingly focusing on integrating ICT into the curriculum to enhance the quality of education. The goal is to make learning more enjoyable while helping students develop critical thinking skills and technological literacy. In the context of gamification, ICT supports the creation of interactive learning platforms that utilize game-based strategies to simplify complex concepts, making them easier for students to understand. The theoretical foundations of gamification in education draw from both constructivist and behaviorist approaches. Constructivism emphasizes student-centered learning, while behaviorism underscores the role of rewards and feedback in motivating learners. Gamified learning, powered by digital tools and ICT, merges these perspectives by increasing engagement and providing incentives for academic success.

Increasing Engagement and Motivation: Gamification has the potential to greatly improve student engagement in Tamil Nadu's high schools by making the learning process more interactive. By incorporating game-like elements such as point systems and leaderboards, educators can motivate students to take a more active role in their education. Gamification shifts learning from a passive activity to an engaging experience where students are driven by goals and rewards. In environments where the emphasis is often on high-stakes exams, gamified systems can also promote continuous and

formative assessments. This approach encourages students to participate in ongoing learning tasks rather than cramming for a single final exam, making the process both less stressful and more enjoyable.

Fostering Creativity and Problem-Solving: Gamification promotes higher-order thinking by presenting lessons as quests or challenges, encouraging students to not only recall information but also apply their knowledge in innovative ways. This approach is particularly advantageous in subjects like mathematics, science, and social studies, where problem-solving and critical thinking are crucial. In Tamil Nadu's high schools, shifting from rote memorization to creative problem-solving can help bridge the gap between theoretical knowledge and practical application. For example, a science lesson on environmental conservation could be transformed into a gamified challenge where students design a sustainable ecosystem with limited resources. Another major benefit of gamification is its potential to support personalized learning. In a gamified environment, students can progress at their own pace, which is especially beneficial in Tamil Nadu's classrooms, where the student-to-teacher ratio is often high. Gamification facilitates differentiated learning, allowing advanced students to move ahead while those who need more support can receive it without being singled out. With the increasing availability of adaptive learning platforms, gamified systems can tailor learning pathways to each student's strengths and weaknesses. For instance, a student excelling in mathematics may unlock more complex problems, while a student struggling with the subject could receive additional hints and practice.

Digital Divide and Infrastructure: The primary challenge in implementing gamification in Tamil Nadu's high schools is the digital divide. While urban schools generally have access to computers and the internet, many rural schools lack these essential resources. Since gamification heavily depends on technology whether through online platforms, educational apps, or digital games ensuring equitable access across all schools will require substantial investment in infrastructure, particularly in rural areas. Although the state government has launched initiatives such as the Smart Classroom Initiative to address this gap, a sustained long-term effort is needed to ensure that all students can benefit from gamified learning. Another significant challenge is teacher preparedness. Many educators in Tamil Nadu are either unfamiliar with gamification techniques or lack the digital literacy needed to effectively implement them. Gamification requires a shift from traditional teaching methods toward a more interactive, student-centered approach. To facilitate this shift, comprehensive teacher training programs will be essential, equipping educators with the necessary skills to utilize gamified tools and platforms effectively. Additionally, there must be a willingness among teachers to embrace new pedagogical methods, which may require a broader cultural shift within the teaching profession.

Balancing Gamification with Curriculum Objectives: While gamification presents numerous advantages, its implementation must be carefully managed to align with the curriculum goals of Tamil Nadu's education system. Currently, the system places significant emphasis on standardized testing and exam performance. There is a risk that an overemphasis on gamified elements could shift focus away from essential learning objectives or result in shallow engagement, where students prioritize earning rewards over truly mastering the content. Therefore, it is essential to strike a balance between using gamification as a tool for motivation and ensuring that students develop the deep understanding and skills necessary for success in both their exams and future careers.

Future Implications of Gamification in Tamil Nadu's Education System: The effective integration of gamification in Tamil Nadu's high schools has the potential to significantly impact student outcomes. By making the learning process more engaging and relevant to students' experiences, gamification could help address issues such as high dropout rates, particularly in rural areas where student

disengagement is a major concern. Additionally, students who participate in gamified learning environments are more likely to develop essential 21st-century skills, including creativity, collaboration, and digital literacy, all of which are crucial for thriving in a rapidly evolving global landscape. Furthermore, gamification can foster a love of learning by nurturing intrinsic motivation. Students who find enjoyment in the learning process are more inclined to pursue higher education and continue honing their skills throughout their lives.

Conclusion: As gamification becomes more prevalent, the role of teachers is expected to evolve from mere transmitters of information to facilitators and guides in the learning process. In a gamified classroom environment, teachers will focus more on tracking student progress, providing personalized feedback, and encouraging collaboration among learners. This shift could lead to more tailored and effective teaching methods, addressing the individual needs of students more effectively. However, it also calls for substantial changes in teacher training and classroom management strategies. Educators must become proficient in using digital tools and designing learning activities that balance gamified engagement with academic rigor. For gamification to achieve its full potential in Tamil Nadu, policy reforms will be crucial. The state's education department will need to establish clear guidelines for the incorporation of gamified elements into the curriculum. This includes revising assessment practices to include continuous and formative assessments alongside traditional exams. Additionally, it is essential to ensure that rural and under-resourced schools are not excluded from this digital transformation. Adequate investments in teacher training, infrastructure, and educational technology will be necessary to guarantee equitable implementation of gamification across all high schools in the state. The gamification of education presents an exciting opportunity to reinvigorate high school education in Tamil Nadu, making learning more engaging, interactive, and personalized, and potentially addressing persistent educational challenges.

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EFFECT OF CONSTRUCTIVISTS BASED TEACHING ON SCIENCE ATTITUDE OF STUDENTS AT SECONDARY SCHOOL LEVEL OF BELTHANGADY TALUK

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Abstract

The study dealt on the effectiveness of Constructivists based teaching on the student's attitude towards science. This approach has six stages of learning. The present study is experimental study post-test equivalent group design. All students of Beltangady taluk were taken as a population of the study. Randomly selected 70 students were samples of the study. Science Attitude Scale, constructed by Mrs. Avinash Grewal. Data was collected and analysed using statistical techniques, 't' at 0.05 level of significance. The result of the study revealed that Constructivists based teaching had the significant effect in developing Science Attitude among Secondary School Students.

***Keywords:** Constructivists Based Teaching, Science Attitude, and Secondary School Students.*

Introduction: A meaningful education, aim at giving learner wide horizon of knowledge and skill to meet the demand of their environment. The learners need teachers who help the student to achieve what he has to to be in the upcoming future. Constructivism is a very popular idea relating to the learning and teaching of science. One of the major constructivist assumptions is that all knowledge is constructed from previous knowledge irrespective of how one is taught. The main view point of Constructivism is, students who are engaged in active learning are making their own meaning and constructing their own knowledge in the process.

Review of Related Literature: Soumya K(2015), conducted a study on "Relationship between Attitude Towards Science and Achievement in Science among the students of Standard Eight Of kasargod District". The findings of the study revealed that there is significant positive relationship between Standard Eight students in Attitude towards Science and Achievement in Science. R Gnanadevan and A Selvaraj(2013) conducted a study on "Achievement in science Relation to Science Attitude and problem solving ability". The study revealed that academic achievement in science of higher secondary students is having positive significant relationship with problem solving ability and science attitude. Studies considered classes taught with Science technology society approach develop more positive attitude towards science when compared to the classes taught with a textbook oriented method, Academic achievement in science of students is having positive significant relationship with problem solving ability and science attitude and also it is found that there is a significant positive relationship between Attitude Towards Science and Achievement in Science.

Need For the Study: "Science Education is to develop in the child well defined abilities and values such as the spirit of inquiry, creativity, objectivity the courage to question and an aesthetic sensibility. Constructivism is innovative creative scientific temperament idea relating to the learning and teaching of science. In order to build pupils pre-existing understanding of topics teachers must immediately encourage pupils to use their new knowledge in unique situations in order to make meaning connections to their prior understanding. The studies of Zemelman, Daniels, and Hyde (1993) tell us that constructivist theory be incorporated into the curriculum, and advocate that teachers create environments in which children can construct their own understandings. Fisher,Douglas; Ross Onna

;Grant,Maria(2010) revealed that if there is lack of background knowledge of science the students face difficult to understand the context ,lectures and laboratory activities. The results of research studies revealed that Constructivist Instructional Strategies have positive effect in Achievement and Attitude of students in Science. There is need to test the efficacy of these Constructivist instructional model. Especially the duty of the Science teacher is to train the students to develop Science by themselves through constructivism instead of making them passive listeners. In this changing world the challenges of teaching are to help students to think reason it out and to learn logically. These techniques are essential for the present scenario because they enable students to cope successfully with new situation.

Statement of the Problem: Effect of Constructivists Based Teaching on Science Attitude of Students at Secondary School Level of Belthangady Taluk

Operational Definitions of Terms

Constructivists Based teaching: In the present study Constructivist Based teaching refers to a model named Constructivists learning Design constructed by George W. Gagnon, Jr. and Michelle Collay. It is a class room based on Constructivist Learning Design. The primary goal of using the method is to help the students how to learn by giving them training to take initiative of their own learning experience. In such classrooms the learners are actively involved, activities are interactive and teacher facilitates process of learning in which the students are encouraged to be responsible.

In the study the following six phases of Constructivist Learning Design has been applied in the teaching of science.

- Situation
- Groupings
- Bridge
- Questions
- Exhibit
- Reflections

Science Attitude: Science Attitude in the present study is the scores obtained by responding positively and negatively towards a certain idea, person or situation by the pupils to the Standardized test on Science Attitude by Mrs. Avinash Grewal.

Secondary School Students: Secondary school students are the pupils of class Eight, Ninth and Tenth belong to age group 13 to 16.In the current study Secondary School students refers to Eight standard state syllabus students of the academic year 2023-24 in the Private and government schools of Belthangady Taluk.

Methodology: It was an experimental study with posttest only equivalent design. All the secondary school students studying state syllabus in the secondary school situated at rural and urban areas of Belthangady taluk were the population of the study. Randomly selected 70 secondary school students were the samples of the study. Experimental group was taught through Constructivists Learning Design and control group was taught through traditional method. Science attitude was measured at the end of the treatment by administering a tool Science Attitude Scale test constructed by Avinash Grewal. Data was analysed using inferential statistic 't' and the hypotheses were tested at 0.05 level significance.

Objectives of the Study

1. To study the effectiveness of Constructivists based teaching on Science attitude among Standard Eight Students.

2. To study the effectiveness of Constructivists based teaching on High Achievers among Standard Eight Students.
3. To study the effectiveness of Constructivists based teaching on Average Achievers among Standard Eight Students.
4. To study the effectiveness of Constructivists based teaching on Low Achievers among Standard Eight Students.

Hypotheses of the study

$H_0 1$: There is no significant difference in Science attitude among standard eight students taught through Constructivists Based Teaching and Traditional Method.

$H_0 2$: There is no significant difference in Science attitude among High Achievers taught through Constructivists Based Teaching and Traditional Method.

$H_0 3$: There is no significant difference in Science attitude among Average Achievers taught through Constructivists Based Teaching and Traditional Method.

$H_0 4$: There is no significant difference in Science attitude among Low Achievers taught through Constructivists Based Teaching and Traditional Method.

Analysis of Data and Result:

Objective One: To study the effectiveness of Constructivists based teaching on Science Attitude among Standard Eight Students.

$H_0 1$: There is no significant difference in Science attitude among standard eight students taught through Constructivists Based Teaching and Traditional Method.

't' test was employed to test the hypothesis and level of significance was fixed at 0.05 level. The results of the test are given in Table 1.0.

Table 1.0 Details on the posttest mean scores of Science Attitude of Experimental and Control Group.

Group	N	Mean	SD	df	t-value	Result
Experimental	35	33.6	4.2	68	7.71	Significant at 0.05
Control	35	25.8	4.2			

From the table 1.0 it is observed that the calculated 't' value 7.71 is greater than the theoretical value 1.99 at 0.05 level with df 68.Hence the null hypothesis is rejected and alternate hypothesis is accepted. Thus we can conclude that Constructivist based teaching is effective in developing the Science attitude of Eighth Standard Students.

Objective Two: To study the effectiveness of Constructivists based teaching on High Achievers among Standard Eight Students.

$H_0 2$: There is no significant difference in Science attitude among High Achievers taught through Constructivists Based Teaching and Traditional Method.

't' test was employed to test the hypothesis and level of significance was fixed at 0.05 level. The results of the test are given in Table 2.0.

Table 2.0 Details on the posttest mean scores of High Achievers on Science Attitude of Experimental and Control Group.

Group	N	Mean	SD	df	t-value	Result
Experimental	7	32.8	2.5	17	2.43	Significant at 0.05
Control	12	29.3	3.3			

From the table 2.0 it is observed that the calculated 't' value 2.43 is greater than the theoretical value 2.10 at 0.05 level with df 17.Hence the null hypothesis is rejected and research hypothesis is accepted. Thus we can conclude that Constructivist based teaching is effective in enhancing the Science attitude of High Achievers of Eighth Standard Students.

Objective Three: To study the effectiveness of Constructivists based teaching on Average Achievers among Standard Eight Students.

H_0**3:** There is no significant difference in Science attitude among Average Achievers taught through Constructivists Based Teaching and Traditional Method.

't' test was employed to test the hypothesis and level of significance was fixed at 0.05 level. The results of the test are given in Table 3.0.

Table 3.0 Details on the posttest mean scores of Average Achievers on Science Attitude of Experimental and Control Group.

Group	N	Mean	SD	df	t-value	Result
Experimental	22	35	4.1	37	8.39	Significant at 0.05
Control	17	25	2.8			

From the table 3.0 it is observed that the calculated 't' value 8.39 is greater than the theoretical value 2.02 at 0.05 level with df 37.Hence the null hypothesis 'There is no significant difference in Science attitude among Average Achievers taught through Constructivists Based Teaching and Traditional Method' is rejected and research hypothesis is accepted. Thus we can conclude that Constructivist based teaching has significant effect in enhancing the Science attitude of Average Achievers.

Objective Four: To study the effectiveness of Constructivists based teaching on Low Achievers among Standard Eight Students.

H_0**4:** There is no significant difference in Science attitude among Low Achievers taught through Constructivists Based Teaching and Traditional Method.

't' test was employed to test the hypothesis and level of significance was fixed at 0.05 level. The results of the test are given in Table 4.0

Table 4.0 Details on the posttest mean scores of Low Achievers on Science Attitude of Experimental and Control Group.

Group	N	Mean	SD	df	t-value	Result
Experimental	6	30.2	5.1	10	3.4	Significant at 0.05
Control	6	21.3	3.4			

From the table 4.0 it is observed that the calculated 't' value 3.4 is greater than the theoretical value 2.2 at 0.05 level with df 10. Hence the null hypothesis 'There is no significant difference in Science attitude among Low Achievers taught through Constructivists Based Teaching and Traditional Method' is rejected and research hypothesis is accepted. Thus we can conclude that Constructivist based teaching has significant effect in developing the Science attitude of Low Achievers.

Major Findings of the study

- Constructivists based teaching has significant effect in developing the Science Attitude of Eight Standard Students.
- Constructivists based teaching has significant effect in enhancing the Science Attitude on High Achievers of Eight Standard Students.
- Constructivists based teaching has significant effect in enhancing the Science Attitude on Average Achievers of Eight Standard Students.

- Constructivists based teaching has significant effect in enhancing the Science Attitude on Low Achievers of Eight Standard Students.

Implications of the study: The findings of the study have a wide range implication. The study revealed that the use of Constructivists based teaching is effective in developing the positive Science attitude than the traditional method. The above findings indicate that Constructivists based teaching is effective in developing the student's attitude with respect to high, average and low achievers. Hence Constructivists based teaching is useful in encouraging student's personal involvement in their learning activities. Hence the findings of the study have following implications to different level of education.

- This study also revealed that the students liked the group works and also expressed that they got an opportunity to discuss and share with each other and added to this, the constructivist's philosophy believes in both individual and group work to the students while teaching in the classroom.
- Workshop should be organized to teacher educators on Constructivist Learning Model.
- CTE's and DIET should organize workshop on Constructivists Learning Design to in-service teachers.
- Curriculum should be strengthened by giving the attention to hands on activities.

Conclusion: "Learning is the process as wells an outcome". The Present study revealed that Constructivists based teaching is significantly effective in developing the science attitude among Secondary School Pupils. A sincere work is required by teacher education institutions to apply the findings of the innovative practices and enhance the quality on science education.

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THE IMPACT OF VIDEO GAMES IN EDUCATION FOR   HIGHSCHOOL STUDENTS

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Abstract

The introduction of new technologies in society has created a need for interactive contents that can make the most of the potential that technological advances offer. Educational games are such content: they can be defined as video games or interactive applications whose main purpose is to provide not only entertainment but also training in areas of education. At this time of financial, economic and social crisis citizens must be prepared to confront the challenges of the future, and the individual values of each citizen must be joined to those of society as a whole. games are the perfect tool for achieving these aims, and for transmitting contents and values attractively and efficiently.

Keywords: learning Education through Video games, Benefits of video games in Education, Drawbacks of Video games in Education

Introduction: HISTORICAL BACKGROUND When we talk about video games it's history goes way back to the beginning of the 1950's when the then computer scientists started crafting simple games for amusement or as a part of their research program. The computer games of the 1950's is divided into 3 types: research programs in areas such as artificial intelligence, exhibit programs intended to entertain or impress the general public & institutional and training programs. At Massachussetts Institute of Technology (MIT) which is a private university located in Cambridge, many professors and students over there started playing games like Tic-tac-toe & Moon landing in the 1960's. Video games did not become popular until the beginning of the 1970's and 1980's, when arcade video games and gaming consoles had buttons and joysticks on the controllers and innovative graphics on the computer screens were brought to the public. The 1970's was also known as the era of mainframe computer games. The golden age of arcade video games was from the beginning of 1978 to 1982. During the 1980's early online gaming, handheld LCD games and gaming computers came into picture. The 3rd generation of gaming consoles, came into picture from 1983 to 1985. During this period the first consoles released by Japan were Nintendo's Family Computer and Sega's SG-1000. The fourth generation of consoles, which were 16-bit models, came into picture from 1987 to 1999. The 1990s saw the revival and fall of arcades, the movement towards 3D video games, improved handheld games, and PC gaming. The fifth generation of consoles, was from the beginning of 1993 to 2006. During this era, mobile phone gaming came into picture. Mobile phones started becoming video gaming platforms when Nokia introduced the game Snake onto its line of mobile phones in 1997. As the game began to gain popularity, every major phone brand offered "time killer games" that could be played in short moments such as waiting for a bus or a cab. During the early days, mobile phone games were limited by the modest size of the phone screens, the very limited amount of me

memory and processing power on phones, and the drain on the battery power. During the 2000s, the sixth generation of consoles came into picture (1998–2013). During this period, online gaming and mobile games became major aspects of the gaming culture. The seventh generation of consoles was

from the period of 2005 to 2012. This period was marked by huge development budgets for many games, with some having pictoral graphics; the launch of the top-selling Wii console, in which the gamer could have a command on the game actions with real-life movement of the controller. The picture below shows some of the well renowned games of the 7th generation. In 2013, the eighth generation of gaming consoles came into picture, that includes Nintendo's Wii U and Nintendo 3DS, Microsoft's Xbox One, and Sony's PlayStation 13 and PlayStation Vita. PC gaming has been holding a large market share in Asia and Europe for decades and continues to grow due to digital distribution. Since the development and widespread consumer use of smartphones, mobile gaming has been a driving factor for games, as they can reach people formerly uninterested in gaming, and those unable to afford or support expensive dedicated hardware, such as video game consoles.

Definition of Video Games: Video games are electronic games played on a video screen (normally a television, a built-in screen when played on a handheld machine, or a computer). People can also use computers to play games, which are sometimes called PC games. The older consoles do not have new games developed for them often, although console games are emulated for PCs. This means that new computers can play many old console games along with games made just for new computers. Older games are often more popular emulated than when they were first on sale, because of the ease of download. People can play portable video games anywhere.

Benefits and Drawbacks of Playing Video Games in Education: Video games are frowned upon by parents as time-wasters, and worse, some education experts think that these games corrupt the brain. Playing violent video games are easily blamed by the media and some experts as the reason why some young people become violent or commit extreme anti-social behavior. But many scientists and psychologists find that video games can actually have many benefits – the main one is making kids smart. Video games may actually teach kids high-level thinking skills that they will need in the future. ―Video games change your brain,‖ according to University of Wisconsin psychologist C. Shawn Green. Playing video games change the brain's physical structure the same way as do learning to read, playing the piano, or navigating using a map. Much like exercise can build muscle, the powerful combination of concentration and rewarding surges of neurotransmitters like dopamine strengthen neural circuits that can build the brain.

The main benefits of playing video games involve enhancing mental skills that include:

1. Problem solving and logic – When a child plays a game such as The Incredible Machine, Angry Birds or Cut The Rope, he trains his brain to come up with creative ways to solve puzzles and other problems in short bursts

2. Hand-eye coordination, fine motor and spatial skills. In shooting games, the character may be running and shooting at the same time. This requires the real-world player to keep track of the position of the character, where he/she is heading, his speed, where the gun is aiming, if the gunfire is hitting the enemy, and so on. All these factors need to be taken into account, and then the player must then coordinate the brain's interpretation and reaction with the movement in his hands and fingertips. This process requires a great deal of eye-hand coordination and visual-spatial ability to be successful. Research also suggests that people can learn iconic, spatial, and visual attention skills from video games. There have been even studies with adults showing that experience with video games is related to better surgical skills. Also, a reason given by experts as to why fighter pilots of today are more skillful is that this generation's pilots are being weaned on video games.

3. Planning, resource management and logistics. The player learns to manage resources that are limited, and decide the best use of resources, the same way as in real life. This skill is honed in strategy games such as SimCity, Age of Empires, and Railroad Tycoon. Notably, The American Planning Association, the trade association of urban planners and Maxis, the game creator, have claimed that SimCity has inspired a lot of its players to take a career in urban planning and architecture.

4. Multitasking, simultaneous tracking of many shifting variables and managing multiple objectives. In strategy games, for instance, while developing a city, an unexpected surprise like an enemy might emerge. This forces the player to be flexible and quickly change tactics. Cognitive researcher Daphne Bavalier talks about how video games can help us learn, focus and, fascinatingly, multitask.

5. Quick thinking, making fast analysis and decisions. Sometimes the player does this almost every second of the game giving the brain a real workout. According to researchers at the University of Rochester, led by Daphne Bavelier, a cognitive scientist, games simulating stressful events such as those found in battle or action games could be a training tool for real-world situations. The study suggests that playing action video games primes the brain to make quick decisions. Video games can be used to train soldiers and surgeons, according to the study. Importantly, decisions made by actionpacked video game players are no less accurate. According to Bavelier, ―Action game players make more correct decisions per unit time. If you are a surgeon or you are in the middle of a battlefield, that can make all the difference.‖

6. Accuracy – Action games, according to a study, train the player's brain to make faster decisions without losing accuracy. In today's world, it is important to move quickly without sacrificing accuracy.

7. Strategy and anticipation – Steven Johnson, author of Everything Bad is Good for You: How Today's Popular Culture is Actually Making Us Smarter, calls this ―telescoping.‖ The gamer must deal with immediate problems while keeping his long-term goals on his horizon.

8. Situational awareness – – Defense News reported that the Army include video games to train soldiers to improve their situational awareness in combat. Many strategy games also require the player to become mindful of sudden situational changes in the game and adapt accordingly.

9. Developing reading and math skills – The young gamer reads to get instructions, follow storylines of games, and get information from the game texts. Also, using math skills is important to win in many games that involves quantitative analysis like managing resources.

10. Perseverance – In higher levels of a game, the player usually fails the first time around, but he keeps on trying until he succeeds and move on to the next level.

11. Pattern recognition – Games have internal logic in them, and the player figures it out by recognizing patterns.

12. Estimating skills

13. Inductive reasoning and hypothesis testing – James Paul Gee, professor of education at the University of Wisconsin-Madison, says that playing a video game is similar to working through a science problem. Like a student in a laboratory, the gamer must come up with a hypothesis. For example, the gamer must constantly try out combinations of weapons and powers to use to defeat an enemy. If one does not work, he changes hypothesis and try the next one. Video games are goal-driven experiences, says Gee, which are fundamental to learning.

14. Mapping – The gamer use in-game maps or build maps on his head to navigate around virtual worlds.

15. Memory – Playing first person shooter games such as Call of Duty and Battlefield series enables the player to effectively judge what information should be stored in his working memory and what can be discarded considering the task at hand, according to a study published in the Psychological Research.

16. Concentration – A study conducted by the Appalachia Educational Laboratory reveal that children with attention-deficit disorder who played Dance Revolution improve their reading scores by helping them concentrate.

Objectives of the Study: The objectives of the topic were framed keeping in mind the kind of impact video games have on youth. The objectives give a brief idea about the areas to be studied and what will be achieved from the study.

1. To identify the positive aspects that video games in Student education have on them.

2. To identify the negative aspects that video games in Student education have on them.

Review of Literature

1. According to Cyril Rebetez, Mirelle Betran Court, Department of Psychology & Educational Sciences, Geneva UniversityThey conducted a research on cognitive impact of playing video games. In this study, 3 different fields were reviewed: abilities and skills, attitudes and motivation, knowledge and content learning. In summary, the were able to find out that video games are considered as promising new materials or tasks that can foster knowledge of the dimension under proper investigation. They also concluded saying that they do not consider video games as scientific objects of interest and consequently, they do not intend to contribute to the general understanding of the cognitive impact of video games at large.

2. According to Isabela Granic, Adam Lobel, Radbound University NijmeganThey conducted a research on the benefits of playing video games focusing on 4 main domains- cognitive, motivational, emotional and social. They found out that video games can include competitive and cooperative objectives, players immerse them in pretend worlds that are safe contexts in which negative emotions can be worked out, and games allow a sense of control with just enough unpredictability to feel deep satisfaction and intense pride when formidable goals are reached. 39 | P a g e

3. According to Rong Shao, Nanjing Normal University, Nanjing, China They conducted a research to find out adolescent aggression because of video games. A total of 648 Chinese middle school students participated in this study. They found out that exposure to violent video games is positively related to adolescent aggression.

4. According to K. Przybylski & Netta Weinstein, The Royal Society Publishing In their study, they investigated the extent to which adolescents who spent time playing violent video games exhibit higher levels of aggressive behavior when compared with those who do not. A large sample of British adolescent participants age 14 and 15 years and an equal number of carriers were interviewed. They used survey method and they found out that there was no relation between playing violent video games and its impact on aggressive behavior.

5. According to Simone Kuhn, Dimitrij Tycho Kugler, Molecular Psychiatry, They conducted a research on whether video games promote aggression or reduce empathy in its players. The research was conducted on 90 healthy participants consisting of college students & participants of the general community. The video games provided were GTA 5 and SIMS 3. The experiment was conducted for 2 months were the players played both the 40 | P a g e games for 2 months. They found that there was almost no relation or minimal relation between those 2 video games and their change in behavior.

6. According to Muhammad Quvaider, Abdullah Albed & Rehab Diwari, Jordan university of Science and Technology, Jordan. They conducted a research on how video games affect the behavior and emotions of the player and whether it had a positive or a negative impact. They collected data in 2 ways. The first was based on collecting the data by the player using questionnaires, surveys and interviews before, during or after playing the video games. The second way is called in-game data collection where the data was collected directly from the player through the video game by using the Fivefactor test model. They found out that there was a relationship between video games and a person's behavior. They supported their claim in 2 aspects. The first one is on the game type and the second one is that the time the player has spent.

7. According to Lisa Bowen, American Psycholgical Association, She conducted a research on whether video games provide learning health and social benefits. She found out that video games help children in their pattern recognition and problem solving skills, promote relaxation and ward off anxiety if video games are played within proper time limits. If those time limits are crossed, there are negative aspects to it like aggression and even 41 | P a g e violent behaviour sometimes. She found out that these changes in behavior are directly related to the number of gaming hours.

Implication of the Study: This study carries significant practical implications its main findings . The evidences establishes a positive relationship between digital educational games and students, mediated through their learning engagement. By incorporating these games into teaching methods, students can focus on their abilities and observe their peers' engagement, fostering interest and active participation. This, in turn, enhances their knowledge and skills.

Conclusion: Video games can be a boon or a curse to the gamer and the people around the gamer depending upon the game he plays and the number of hours the gamer spends on playing video games. Since guys spend more time playing video games as compared to girls, the ill effects and the positive aspects are seen on them more evidently as compared to girls. Guys get addicted to games like GTA 5, Call of Duty, PUBG because of their story modes and sometimes when they play continuously for hours and hours of those violent video games, they tend to act aggressive to their loved and dear ones. In doing so, they are socially affected as a person in a negative way. When PUBG is played for long hours on the mobile phone, it affects the eyesight of the gamer and the sleeping pattern of the gamer in a negative way. When a gamer doesn't get proper sleep he cannot perform his tasks properly the next day and this can spoil the whole routine of the gamer. When a student doesn't get enough sleep he won't be able to focus on his grades studies which can end up impacting his grades. On the positive side, it can be noted that video games help in quick thinking and making fast analysis. Games like Fruit Ninja and Temple Run help the gamer in making on the spot quick decisions in real life. It played within a proper time constraint, t can help the teenagers in releasing dopamine, promote relaxation and reduce anxiety. Real life skills like coordination and team management also get improved by playing online games like PUBG because it requires in game communication. In short, video games can help the youth in their real life skills if they can learn to play it wisely and if not it can cause social and health problems for the gamer in the future

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN TEACHING SPORTS, PHYSICAL, AND HEALTH EDUCATION

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Abstract

Artificial Intelligence (AI) is revolutionizing sports, physical, and health education by enhancing personalization, student engagement, and real-time feedback. This paper explores the integration of AI technologies such as machine learning, data analytics, and virtual reality to improve performance analysis, create tailored training programs, and offer adaptive learning experiences in physical and health education. AI also assists in injury prevention, rehabilitation, and coaching, while addressing accessibility for diverse learners. Despite its benefits, challenges such as data privacy, costs, and the need for teacher training must be managed for effective implementation. AI's role in reshaping education is both promising and transformative.

Keywords: Artificial Intelligence, Sports Education, Physical Education, Health Education, etc.,

Artificial Intelligence (AI) has emerged as a transformative force in numerous fields, including education. In the realm of sports, physical education, and health education, AI offers innovative solutions that enhance teaching methods, improve student engagement, and provide personalized learning experiences. This article explores the various ways AI is revolutionizing these fields, the benefits it offers, and the challenges that accompany its integration.

Introduction to AI in Education: AI refers to the simulation of human intelligence processes by machines, particularly computer systems. These processes include learning (acquiring information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions), and self-correction. In education, AI can automate routine tasks, provide real-time feedback, and create adaptive learning experiences tailored to individual needs.

1. AI in Sports Education: AI technologies, such as machine learning, computer vision, and data analytics, are redefining sports education. AI-driven tools can analyze an athlete's performance, provide personalized feedback, and develop tailored training programs. Here's how AI is specifically enhancing sports education:

Performance Analysis and Improvement: AI-powered video analysis tools can capture and break down an athlete's movements in real time. These systems use computer vision and machine learning algorithms to analyze posture, speed, balance, and technique, providing insights that coaches can use to correct flaws and optimize performance. For instance, AI can analyze a sprinter's stride and suggest adjustments to improve speed or examine a swimmer's stroke to enhance efficiency.

Personalized Training Programs: AI enables the creation of personalized training plans based on an athlete's current performance, goals, and physical condition. By analyzing data from wearable devices, AI can monitor heart rate, calories burned, sleep patterns, and other health metrics, adjusting training regimens as needed. This personalized approach not only maximizes performance but also reduces the risk of injury by ensuring that training intensity matches the athlete's capacity.

Injury Prevention and Rehabilitation: AI plays a critical role in injury prevention and rehabilitation. By analyzing biomechanical data, AI can identify patterns that indicate a high risk of injury. For example, AI can detect incorrect landing techniques in basketball players that might lead to ankle

sprains or knee injuries. Additionally, AI-driven rehabilitation programs use data to tailor exercises that aid recovery, tracking progress and adjusting exercises as the athlete heals.

Enhancing Coaching Effectiveness: AI assists coaches by providing them with detailed analytics and insights that would be time-consuming or impossible to gather manually. For instance, AI can analyze opponent strategies, player performance under different conditions, and team dynamics. This information allows coaches to make data-driven decisions on tactics, player positioning, and training focus areas.

2. AI in Physical Education: Physical education aims to develop students' physical competence, promote physical activity, and teach lifelong healthy habits. AI can significantly enhance physical education by making it more engaging, personalized, and effective.

Personalized Learning and Skill Development: AI-powered platforms can assess each student's physical abilities and tailor activities to their skill levels. For example, a student struggling with coordination can receive targeted exercises to improve specific skills, while more advanced students can be challenged with complex tasks. This personalized approach ensures that all students, regardless of their starting point, can progress at their own pace.

Enhancing Student Engagement: AI can make physical education more interactive and fun through gamification and virtual reality (VR). AI-driven apps can turn workouts into games, where students earn points, badges, or rewards for completing activities. VR can simulate various sports environments, allowing students to experience different activities without the need for extensive equipment or facilities. For instance, students can practice skiing or rock climbing in a virtual environment, making physical education classes more diverse and engaging.

Real-Time Feedback and Assessment: AI provides real-time feedback on students' performance, helping them correct mistakes as they occur. For example, motion sensors and AI algorithms can detect improper form during exercises and immediately notify the student, allowing them to make adjustments. This immediate feedback loop helps students learn correct techniques faster, reduces the risk of injury, and enhances overall learning outcomes.

Monitoring and Promoting Physical Activity: AI can track students' physical activity levels both in and out of school. Wearable devices equipped with AI can monitor steps taken, calories burned, and active minutes, encouraging students to stay active throughout the day. Teachers can use this data to set class-wide activity goals or create challenges, fostering a culture of health and fitness beyond the classroom.

3. AI in Health Education: Health education focuses on teaching students about physical, mental, and social well-being. AI has the potential to make health education more personalized, accessible, and effective.

Personalized Health Education: AI can tailor health education content to the needs of individual students. For example, AI-powered platforms can assess a student's knowledge and learning style, adjusting the difficulty and presentation of content accordingly. A student with a keen interest in nutrition might receive more in-depth information on healthy eating, while another who struggles with stress management might be provided with targeted resources on mental health.

Enhancing Accessibility: AI makes health education more accessible to students with diverse needs. For instance, AI-driven speech-to-text and text-to-speech tools can help students with visual or hearing impairments access educational content. Additionally, AI can translate health education materials into

multiple languages, ensuring that non-native speakers or students with different language backgrounds can fully participate.

Interactive Learning Experiences: AI enhances health education through interactive tools and simulations. For example, AI-powered chatbots can answer students' questions on health topics, provide advice, and direct them to relevant resources. Virtual simulations can help students learn about the human body, explore the effects of different lifestyles on health, or practice making healthy decisions in a safe, controlled environment.

Data-Driven Insights for Health Promotion: AI can analyze large datasets to identify trends and patterns in student health behaviors. This information can guide health promotion initiatives, allowing educators to address common issues such as poor nutrition, lack of physical activity, or mental health challenges. By understanding the specific needs of their student population, educators can design more effective health education programs that resonate with their audience.

4. Benefits of AI in Sports, Physical, and Health Education

Increased Personalization: AI enables a high level of personalization that is difficult to achieve through traditional teaching methods. By tailoring content, feedback, and training programs to individual needs, AI ensures that each student receives the support necessary to thrive.

Enhanced Engagement: Through interactive tools, gamification, and real-time feedback, AI makes learning more engaging. Students are more likely to stay motivated and invested in their education when they receive immediate responses to their actions and can track their progress.

Improved Outcomes: AI-driven insights allow for data-driven decision-making in both teaching and coaching. By providing detailed analytics and personalized feedback, AI helps students and athletes achieve their full potential, improving performance, skills, and health outcomes.

Accessibility and Inclusivity: AI makes education more accessible to students with disabilities, language barriers, or other challenges. By adapting content and delivery methods to individual needs, AI ensures that all students can participate fully in sports, physical, and health education.

5. Challenges of AI Integration

Privacy and Data Security: The use of AI in education involves the collection and analysis of personal data, raising concerns about privacy and security. It is crucial to implement robust data protection measures and ensure that student information is handled responsibly.

Cost and Accessibility of Technology: The implementation of AI technologies can be expensive, creating disparities between schools with different levels of funding. Ensuring equitable access to AI tools is essential to prevent widening the gap between well-resourced and under-resourced institutions.

Teacher Training and Adaptation: Integrating AI into education requires teachers and coaches to adapt to new technologies, which can be a significant challenge. Professional development and training are necessary to equip educators with the skills to effectively use AI in their teaching.

Ethical Considerations: The use of AI in education raises ethical questions about fairness, bias, and the role of human judgment. It is important to address these concerns by developing transparent AI systems that prioritize the well-being and rights of students.

Conclusion: The role of AI in teaching sports, physical, and health education is transformative, offering numerous benefits that enhance personalization, engagement, and outcomes. However, the integration of AI also presents challenges that must be addressed to ensure equitable and ethical use. As AI continues to evolve, it holds the potential to reshape the future of education, providing innovative solutions that meet the diverse needs of students in sports, physical, and health education. Embracing

AI with careful consideration and a commitment to inclusivity will allow educators to unlock new possibilities in teaching and learning.

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ADVANCE ORGANIZER MODEL, AN INNOVATIVE STRATEGY IN DEVELOPING CONCEPTUAL STRUCTURE IN BIOLOGICAL SCIENCE– A PERSPECTIVE

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Abstract

The Advance Organizer Model, AOM, has been developed as an effective tool for pedagogy, especially in terms of biological science. This paper takes up the challenging prospective scope that AOM can have towards developing conceptual structure and enriching the student's grasp of concepts. The AOM gives it a formative shape which connects the existing information with the new piece of information and enhances meaningful learning and retention. This paper covers the theoretical underpinning of AOM, practical application of AOM in the education of biological science, and evidence about its effectiveness. It is in conclusion that AOM will ensure that students are taught with better understanding, develop critical thinking skills, and establish reasons to learn biology for life.

Keywords: Advance Organizer Model, Effective tool, Conceptual Structure, Retention, Critical thinking

Introduction

Introduction: The Meaning of Education

Briefly, education is a process through which knowledge, skills, and values are acquired. It enables a learner to understand things around him better and empowers him in taking better decisions for himself and society at large. It has nothing to do with the mere memorization of facts, but it also involves training in the ability to think critically and develop problem-solving skills; one gets trained as a lifelong learner.

Indeed, education is a vital preparatory process both for the individual and society. Education is not merely parroting but a live platform where thinking is exercised, and concepts are actualized. Considering these circumstances, a variety of instructional models has given birth to the aim of enhancing learning outcomes. Among those models is the Advance Organizer Model that helps in integrating the new information with the existing knowledge.

Advance Organizer Model Meaning: An advance organizer is an advance cognitive tool that interlinks new information with the conceptual or cognitive framework the learner is familiar with. This cognitive tool functions like a mental framework. It prepares the learner to receive the new material in a better way and for better understanding. Advance organizers, in other words, help the learner to see how the complex information pieces fit together. The Advance Organizer Model, developed by David Ausubel, demands that new information be connected to the existing knowledge which learners already have. One of the major learning processes based on this model is presenting a conceptual framework or overview of the information in advance of exposing it in detail. This model serves as a cognitive scaffold that can help people better organize and integrate new concepts.

Defining Conceptual Structure in Biology Science: In the biological sciences, the conceptual framework is the relationships among ideas, principles, and theories that constitute the domain. A matured conceptual framework of biological science allows a student to perceive an overall image and relate seemingly piecemeal pieces of information. The term conceptual structure in Biological Science

denotes the system of ideas that provides a framework for biological knowledge. In this case, it involves relationships between concepts such as cells, ecosystems, genetics, or even evolution. A sound conceptual structure allows learners to understand much more complicated biological processes and to apply understanding in many varied contexts.

Significance of Concept Development: Concept development is an important contribution of Biological Science to the learners as it enables them to formulate a meaningful understanding of the subject. Concept development ensures critical thinking, problem-solving, and decision-making. In addition, prior conceptual knowledge helps students to transfer knowledge to new situations that make them interact meaningfully with scientific content.

Why is concept development important in biological science?

• **Biological Science Conceptual understanding** - a sound conceptual framework aids the learner to understand complex biological phenomena and their mechanisms.

• **Experimentation:** A solid conceptual framework makes students good problem solvers, learn to state hypotheses, and design experiments.

• **Lifelong learning:** Strong conceptual understanding of biological science provides a sound platform for further studies and exploration in related fields.

The Advance Organizer Model has the following advantages in the context of Biological Science:

• **Enhanced Understanding:** Advance organizers can assist in giving biology students a mental framework to understand new concepts. New information is more understood as a complex biological concept when connected to prior knowledge.

• **Better Retention:** Advance organizers improve memory retention by providing an organizational framework through which information is stored. Information organization aids retention of what the student has learned because he or she sees relevance in what they are learning.

• **Facilitation of transfer of learning:** Advance organizers help bring new information into already known relations, therefore applying new understanding to a new situation. The approach offers an explicit structure that guides students through a course and reduces the feeling of overwhelmingness while learning.

• **Promote Active Learning:** New material is learned in relation to existing knowledge, thus challenging the students to be more active thinkers. Advance organizers provide motivation to the learners since they have a clear learning roadmap and satisfaction in attaining knowledge step by step.

Implementation of Advance Organizer Model in Biological Science includes the following steps:

• **1. Identify Key Concepts:** Determine the key ideas and relationships that flow within the topic to be taught.

• **2. Create Advance Organizers:** Prepare visual aids, outlines, or concept maps that summarize these key concepts.

• **3. Introduce Organizers Before Instruction:** Introduce the advance organizer to the students before teaching the detailed content.

• **4. Encourage Active Participation:** Engage your students in discussions and activities that help them to make connections between the new material and their prior knowledge.

• **5. Review and Reinforce:** After instruction, revisit the advance organizer again to reinforce those connections and solidify understanding.

Here are some strategies for implementing the advance organizer model in biological science classrooms:

• **Concept maps:** Create visual representations of the relationships between key concepts in a unit.

• **KWL charts:** Establish KWL charts to reactivate prior knowledge, introduce new ideas, and monitor for understanding.

• **Analogies and metaphors**: Compare biological concepts to everyday examples that could help to enhance their understanding

• **Guided reading:** Give the students questions or prompts to focus them on key concepts as they read through a textbook or other material.

• **Illustration: Apply Advance Organizer Model to Teach Cell**
    1. To introduce the idea of a cell, one would need to utilize a concept map to represent the relationships from all parts of the cell, which should include the nucleus, cytoplasm, and organelles. Then, the teacher would use a KWL chart to spark the prior knowledge of the students with regard to cells and introduce new terms and concepts. The teacher could then utilize analogies or metaphors to make it possible for students to see what this cell looks like inside and how it functions.
    2. Nevertheless, this advance organizer would include a concept map that outlined the different types of cells (prokaryotic and eukaryotic), the structures (nucleus, organelles), as well as their functions. Showing this map to students before one describes the anatomy of cells must be done by the teacher, including how these components work in living organisms. As they are learning about specific cell structures, they can refer to the concept map to solidify their understanding of the position of these structures in the larger context of cellular biology.

Conclusion: The use of advance organizers for learning and understanding in biological science is very precious. Using structured frameworks to help students relate the new information to pre-existing knowledge will make them critically think, thus grasping deep understanding of complex biological concepts. Teachers can make their teaching learners have a more interesting, effective, and meaningful learning experience by integrating the advance organizer model into the classrooms. The Advance Organizer Model is a fantastic strategy for teaching Biological Science students in such a manner that it brings about enhanced and retained understanding of the subject matter. Through linking new information to existing knowledge, this model serves to advance learning in the sense of releasing students to have meaning dialogues with intricate scientific matters. This implementation could result in changing the nature of the learning process so that the process becomes more structured, interactive, and effective. Advances in teaching methods have ensured that the Advance Organizer Model has been a significant factor in deep understanding in the sciences for teachers even as they continue to seek new approaches to teaching.

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DIGITAL PEDAGOGY: TRANSFORMING TEACHING AND LEARNING IN THE 21ST CENTURY

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Abstract

Background: *Digital pedagogy is transforming the present educational scenario by combining teaching-learning and technology to create engaging, effective, and accessible educational experiences. It involves using digital tools, technologies, and methods to support teaching and learning, enhancing student outcomes, and fostering innovative educational practices. The present research paper tries to explore the digital pedagogy in present classroom teaching-learning context.*

Literature review: *An exhaustive literature review was done to identify the research problem in this study.*

Research Question: *How does digital pedagogy affect student learning outcomes and teacher effectiveness in an educational setting?*

Methodology: *This mixed-methods study combines survey, interview, and content analysis to investigate digital pedagogy's effect on:*

1. Student learning outcomes (academic achievement, motivation).

2. Teacher effectiveness (instructional design, professional development).

Sample: *50 teachers and 150 students from higher education institutions in West Bengal.*

Data Analysis: *Quantitative data will be analyzed using descriptive and inferential statistics. Qualitative data will be coded, themed, and content analysis will be done.*

Significance: *This study may contribute to the understanding of digital pedagogy's potential to revolutionize present education. Findings will inform educators, policymakers, and researchers on effective strategies for integrating digital pedagogy in the teaching-learning process.*

Keywords: *digital pedagogy, educational technology, digital transformation, teaching-learning.*

Introduction: The 21st century has witnessed a paradigm shift in education, driven by the rapid advancement of digital technologies. Digital pedagogy, the convergence of teaching-learning and technology, has emerged as a transformative force in education. By harnessing digital tools, technologies, and methods, educators can create engaging, effective, and accessible learning experiences that enhance student outcomes and foster innovative educational practices. In recent years, digital pedagogy has revolutionized the educational landscape, offering unparalleled opportunities for teaching and learning. The strategic integration of digital pedagogy has the potential to enhance student learning outcomes and academic achievement, Increase student motivation and engagement, Support teacher effectiveness through instructional design and professional development, and also to Foster collaborative and personalized learning environments

Digital Pedagogy: It is the study and use of contemporary digital technologies in teaching and learning. It may be applied to online, hybrid, and face-to-face learning environments. Digital Pedagogy is not only about using digital technologies for teaching and learning but approaching digital tools from a pedagogical perspective. So, it is as much about using digital tools thoughtfully as it is about deciding when not to use them, and it is about paying attention to the impact of digital tools on learning (Rousseau, P. 2012).   A working definition for digital pedagogy is given by JISC: "We define digital

pedagogy as the study of how digital technologies can be used to best effect in teaching and learning" (JISC, 2020/ 2021), a completion of an older short definition: "In simple terms, a digital pedagogy is the study of how to teach using digital technologies" (Howell, 2013). NEP-2020 (p.19) mentioned that Digital Pedagogy will play the role of support for gifted students with special talents since once internet-connected smartphones or tablets are available in all homes and/or schools, online apps with quizzes, competitions, assessments, enrichment materials, and online communities for shared interests will be developed and will work to enhance all the aforementioned initiatives, as group activities for students with appropriate supervision of parents and teachers. Schools will develop smart classrooms, in a phased manner, for using digital pedagogy and thereby enriching the teaching-learning process with online resources and collaborations. NEP-2020 (p.60) also emphasized that technology is rapidly evolving and needs specialists to deliver high-quality e-learning. A vibrant ecosystem has to be encouraged to create solutions that not only solve India's challenges of scale, diversity and equity but also evolve in keeping with the rapid changes in technology, whose half-life reduces with each passing year. This focus will, therefore, consist of experts drawn from the fields of administration, education, educational technology, digital pedagogy and assessment, e-governance, etc. Despite its potential, the impact of digital pedagogy on teaching and learning remains understudied. This research paper aims to bridge this knowledge gap by exploring the effect of digital pedagogy on student learning outcomes and teacher effectiveness in higher education institutions.

Review of Related Literature: Digital pedagogy, as a convergence of technology and education, has revolutionised the teaching and learning landscape in the 21st century. It encompasses the thoughtful application of digital tools and technologies in educational settings to promote interactive, personalised, and collaborative learning experiences. With the increased adoption of digital technologies in education, educators have transitioned from traditional teaching methodologies to student-centred learning environments. The literature highlights various ways digital pedagogy has transformed teaching practices, improved student outcomes, and enhanced teacher effectiveness. However, gaps still need to be in understanding how to best integrate these technologies for long-term educational success.

Digital Pedagogy: Concepts and Definitions: Digital pedagogy has been widely explored in recent literature, with scholars defining it as more than just using digital tools in teaching. Rousseau (2012) suggests that digital pedagogy is about approaching digital tools from a pedagogical perspective, emphasising the importance of knowing how to use them and understanding when and why to apply them. JISC (2020) defines digital pedagogy as "the study of how digital technologies can be used to best effect in teaching and learning," reflecting the dynamic relationship between technology, pedagogy, and student engagement. Howell (2013) adds that digital pedagogy explores how teaching strategies evolve when digital technologies are integrated into educational environments.

Theoretical Foundations of Digital Pedagogy: The foundation of digital pedagogy lies in constructivist and connectivist learning theories, which focus on learner-centred education. In the constructivist approach, students build knowledge through interaction with digital content and peer collaboration, promoting deeper learning (Siemens, 2005). Digital pedagogy fosters an environment where students actively participate in learning, engaging with digital tools that encourage critical thinking and problem-solving. Connectivism, introduced by Siemens (2004), emphasises the importance of networks and digital platforms in modern learning. The theory posits that learning occurs through exchanging information and knowledge across digital networks. This approach aligns with

digital pedagogy, where students utilise online communities, learning management systems, and social media platforms to connect with peers, educators, and experts beyond the classroom. Digital technologies facilitate collaborative learning, where students co-create knowledge and enhance their understanding through diverse perspectives.

Impact of Digital Pedagogy on Student Learning Outcomes: Digital pedagogy's effect on student learning outcomes is a primary focus in contemporary research. Several studies highlight the role of digital tools in enhancing academic achievement, promoting autonomous learning, and fostering higher levels of student engagement. For instance, using digital platforms for formative assessments has improved student feedback and self-regulation (Nicol & Macfarlane-Dick, 2006). Digital assessments, such as online quizzes and real-time feedback tools, provide students with immediate insights into their learning progress, enabling them to make informed decisions about their study strategies. In addition to assessment tools, digital pedagogy supports personalised learning pathways catering to individual learning needs. Adaptive learning technologies, such as intelligent tutoring systems, allow for customised educational experiences that adjust to the pace and ability of each student (Dabbagh & Kitsantas, 2012). This personalisation promotes student motivation and engagement, as learners can progress at their own pace and receive targeted support when necessary. Collaborative learning, facilitated by digital tools such as discussion forums, virtual classrooms, and cloud-based document sharing, has also proven to enhance student engagement and teamwork skills (Garrison & Anderson, 2003). These tools allow for real-time collaboration, enabling students to collaborate on projects, share ideas, and receive peer feedback. This shift from passive learning to active participation is a hallmark of digital pedagogy's impact on student outcomes.

Digital Pedagogy and Teacher Effectiveness: Teacher effectiveness in digital pedagogy has been another area of focus, particularly in the context of instructional design and professional development. Digital pedagogy requires educators to effectively adapt their teaching methods and integrate technology into their lesson plans. Research indicates that teachers who receive training and support in digital pedagogy are more likely to design engaging, interactive lessons that cater to diverse learning needs (Mishra & Koehler, 2006). Professional development programs, which focus on digital competencies, instructional design, and digital assessment tools, are essential in helping teachers navigate the digital landscape. Moreover, digital pedagogy offers tools that streamline administrative tasks, such as grading and feedback, thus improving teacher efficiency (Luckin et al., 2012). Digital grading platforms and learning management systems (LMS) simplify the assessment process and allow real-time student performance tracking. These tools reduce the burden on teachers and enhance the quality of feedback provided to students.

Challenges and Barriers to Digital Pedagogy: Despite the potential of digital pedagogy, several challenges hinder its widespread adoption. One significant barrier is the digital divide, which refers to the unequal access to digital resources among students and schools. Research shows that students from underprivileged backgrounds often need access to the necessary technology and internet connectivity, which limits their participation in digital learning environments (Selwyn, 2010). This issue raises concerns about equity and inclusivity in education, as students need digital access to be included in the shift toward technology-driven teaching methods. Additionally, there is a need for more comprehensive training programs that focus on digital literacy for both educators and students. While many teachers may be proficient in traditional pedagogical methods, they often need help integrating digital

technologies into their teaching practices. Continuous professional development is necessary to address this gap and ensure teachers can effectively use digital tools in their instruction.

Digital Pedagogy in the Indian Context: NEP-2020: In the Indian context, the National Education Policy (NEP) 2020 highlights the role of digital pedagogy in modernising education. The policy emphasises the development of brilliant classrooms, digital learning materials, and teacher training programs to integrate technology into the curriculum (NEP, 2020). It also recognises the importance of promoting inclusivity and accessibility in digital education through initiatives such as Universal Design for Learning (UDL) and assistive technologies. NEP-2020 aims to address the challenges of scale and diversity in Indian education by leveraging digital technologies. By promoting the use of online platforms, mobile apps, and e-learning resources, the policy seeks to bridge the gap between urban and rural educational institutions. However, the successful implementation of digital pedagogy in India will require significant investment in infrastructure, teacher training, and digital literacy programs.

Objectives:

1. To investigate the effectiveness of student-centred learning approaches enabled by digital pedagogy in promoting autonomous learning and improved academic outcomes.

2. To examine the impact of collaborative learning facilitated by digital tools on student engagement, motivation, and teamwork skills.

3. To analyze the role of digital pedagogy in fostering flexibility and adaptability in teaching and learning, including personalized learning pathways and adaptive assessments.

4. To evaluate the efficacy of digital grading, assessment, and feedback tools in enhancing teacher efficiency, student feedback, and learning outcomes.

Method: Descriptive Survey method was used.

Sample and Sampling Technique: 50 Teacher Educators and 150 Students from Teachers Education Institutions were purposively selected to collect the data.

Tools: Two separate Questionnaires were made to collect the data from Teacher Educators and Students. Data was collected through a questionnaire using Google Forms.

Data Analysis: Data was analysed through content analysis.

Results: Data was analysed objective-wise as below-

Analysis of Teacher Educator's responses:

Figure-1 showing digital tools used to facilitate collaborative learning

By the observation of above figure-1, it was found that the highest used digital tool (82%) by the teacher educators was online collaborative platforms to facilitate collaborative learning whereas only

4% were not using any digital tools to facilitate collaborative learning and surprisingly 2% teacher educators were not aware of any such digital tools.

Which digital tools do you use to support flexible learning?
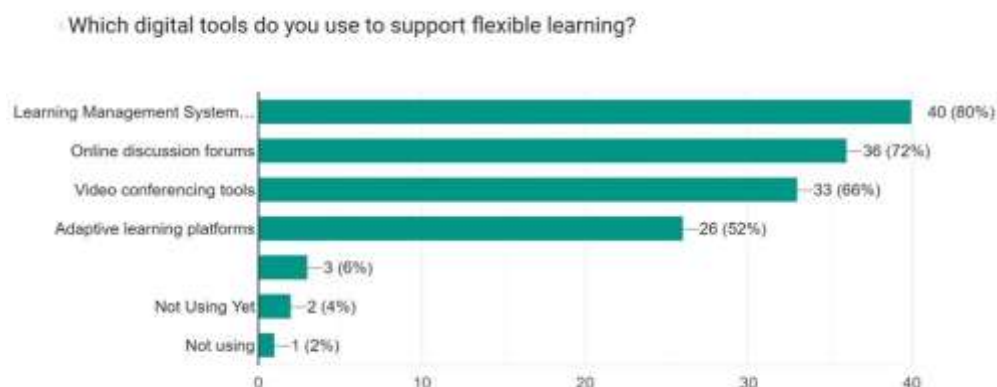
Figure-2 showing digital tools used to support flexible learning

By the observation of above figure-2, it was found that the highest used digital tool by the teacher educators (80%) was Learning Management System (LMS) whereas only 4% were not using any digital tools to support flexible learning and surprisingly 2% teacher educators were not aware of any such digital tools.

Which continuous professional development (CPD) opportunities would you like to see more of?
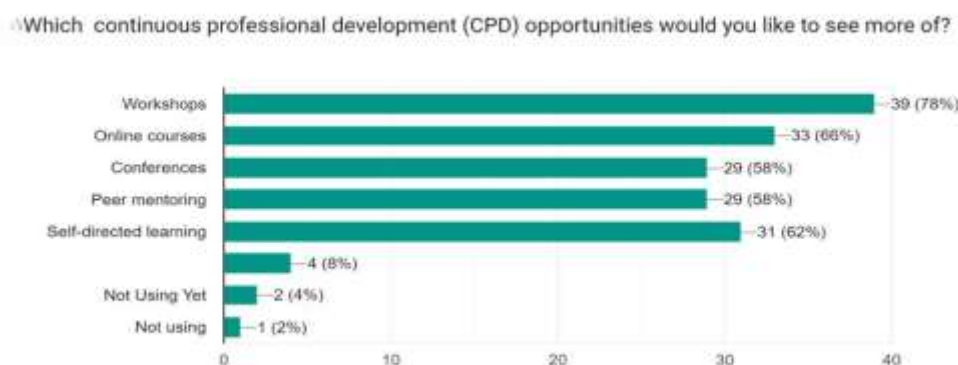
Figure-3 showing digital tools used for Continuous Professional Development (CPD)

By the observation of above figure-3, it was found that the highest preferred digital tool by the teacher educators (78%) was online workshops, whereas only 8% were using any other digital tools for Continuous Professional Development (CPD).

Which digital tools for grading and assessment do you use?
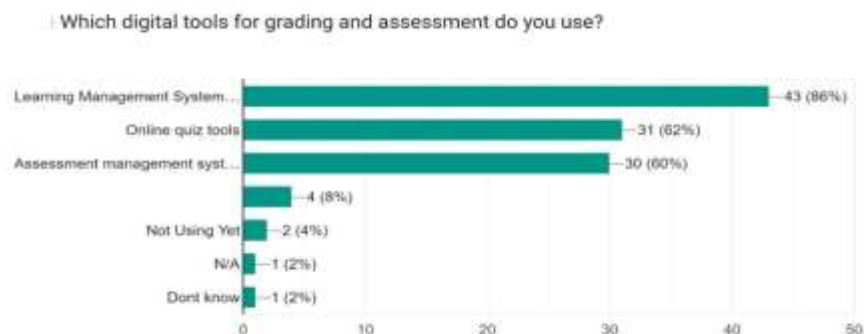
Figure-4 showing digital tools used for grading and assessment

By the observation of above figure-4, it was found that the highest used digital tool by the teacher educators was Learning Management System (86%), whereas 62% were using online quiz tools for grading and assessment.

Analysis of Pupil Teacher's Responses:

Which digital tools do you use to facilitate collaborative learning?
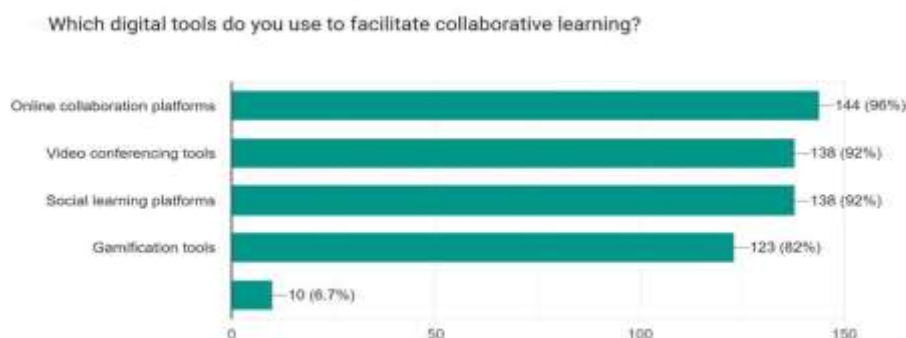
Figure-5 showing digital tools used to facilitate collaborative learning

By the observation of above figure-5, it was found that the highest used digital tool (96%) by the pupil teachers was online collaborative platforms to facilitate collaborative learning whereas only 6.7% were using other digital tools to facilitate collaborative learning.

Which digital tools do you use to support flexible learning?
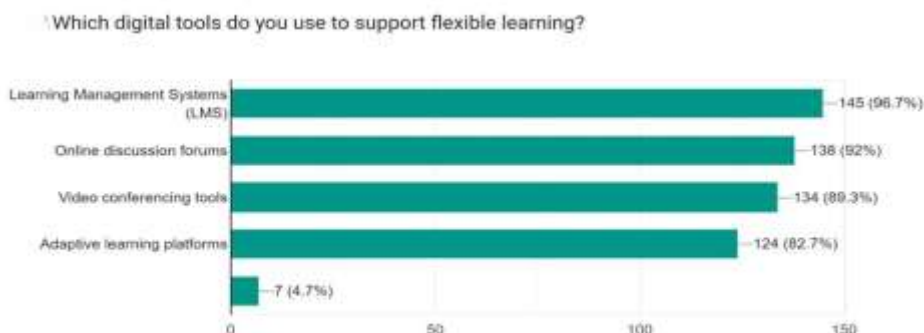
Figure-6 showing digital tools used to support flexible learning

By the observation of above figure-6, it was found that the highest used digital tool by the pupil teachers was Learning Management System (LMS) (96.7%) whereas only 4.7% were using any other digital tools to support flexible learning.
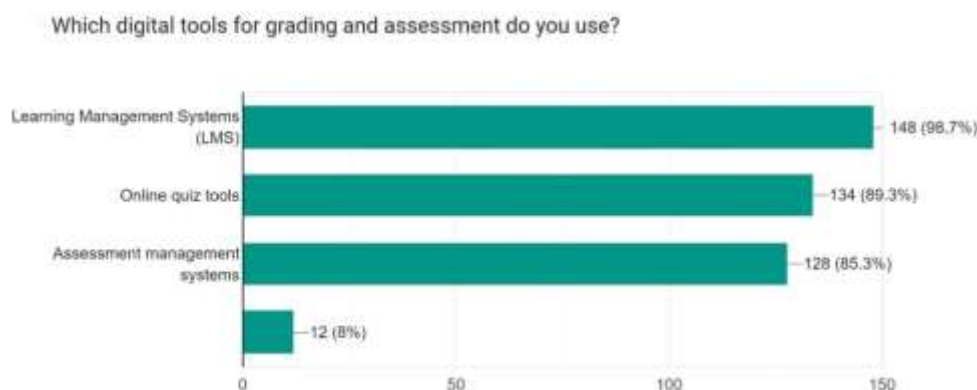
Figure-7 showing digital tools used for grading and assessment

By the observation of above figure-7, it was found that the highest used digital tool by the pupil teachers was Learning Management System (98.7%), whereas 8% were using other tools for grading and assessment.

Findings: The study revealed that digital pedagogy profoundly impacts teaching and learning in higher education institutions. The key findings were as follows-

1. It was found that majority of teacher educators and pupil teachers were using online collaborative platforms to facilitate collaborative learning.
2. It was found that the highest used digital tool by the teacher educators and the pupil teachers was Learning Management System (LMS).
3. It was also found that the highest preferred digital tool by the teacher educators was online workshops for Continuous Professional Development (CPD).
4. It was also found that the highest used digital tool by the teacher educators and pupil teachers were Learning Management System and online quiz as grading and assessment tools.

Conclusion: This study demonstrates the transformative power of digital pedagogy in 21st-century education. The findings highlight the effectiveness of digital pedagogy in enhancing student learning outcomes and teacher effectiveness. The widespread adoption of digital tools among teachers and pupil teachers underscores the potential for digital pedagogy to revolutionise education. Digital pedagogy extends beyond online or hybrid learning environments. It involves reshaping the learning experience in traditional classrooms by incorporating digital resources such as interactive content, digital assessments, and collaborative online platforms. This paradigm shift has challenged educators to rethink their instructional design strategies and adopt digital technologies that support personalised and adaptive learning.

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INQUIRY BASED LEARNING AS A STRATEGY OF TEACHING SCIENCE

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Abstract

Now a day's different innovative pedagogical strategies are using in education to make teaching learning process more effective. Teaching science through inquiry strategy leads to unfoldment of child's mind instead of stuffing it with dead material. Curiosity is an innate urge of human beings. Inquiry-based learning is a type of active learning that encourages students to ask questions, conduct research, and explore new ideas. This approach to learning helps students develop critical thinking, problem-solving, and research skills. The present paper focused on the concept and meaning of Inquiry based learning, the role of teacher in teaching by inquiry based learning, need and scope of inquiry based learning in classroom learning activities. The present paper also tries to explain that how inquiry based learning strategy that needs to be adopted or implemented.

Introduction: Teaching science through inquiry methods leads to unfoldment of child's mind. Teaching science through inquiry methods leads to unfoldment of child's mind instead of stuffing it with dead material. Curiosity is an innate urge of human beings. Whether young or old educated or illiterate everyone has the desire to know the unknown. This urge of curiosity has been responsible for all discoveries and inventions. Newton witnessed the fruit falling down to earth instead of getting into the sky. This led him to the famous law of gravitation. Inquiry technique, as the word implies, relates to the inquiry about the topic. In this method the student is an active learner. He subjects every information or fact to ruthless inquiry in order to know the fact for himself and to test its validity. He puts to prove the theories proposed by his teachers.

Need of new methods: The word 'method 'has been taken from the Latin word which means mode or way. Therefore here it says the technique of delivering knowledge and transmitting scientific skills by a teacher to his or her students and their comprehension and application by them in the process of learning science. According to Valtaire and Spancer, Every method has some goodness in it, and no method is all good. Learners should be told as little as possible and induced to discover as much as possible.

Innovative teaching strategies can help to build better relationships between teachers and students by creating an effective environment that encourages exploration and collaboration. The use of innovative teaching strategies has the potential to revolutionize the way we teach our students.

- ➢ It is highly efficient if a teacher uses in a systematic and logical manner.
- ➢ It is convenient and comfortable, and a teacher is free to develop his/ her style of teaching.
- ➢ The number of students can listen and prepare notes. It saves time and energy.
- ➢ Helps in students' problem solving skills as they bring out their own ideas on issues.
- ➢ It helps in sharpening critical and quantitative thinking skills.
- ➢ Helps students learn how to explain in their own words what they are thinking and doing and not just to memorize terms.

➢ It motivates students more to prepare for a class in which they are expected to participate actively in.

Concept of Inquiry based learning:

This was developed in the 1960s, many teachers see inquiry-based learning as a new pedagogy. Inquiry-based learning is a type of active learning that encourages students to ask questions, conduct research, and explore new ideas. This approach to learning helps students develop critical thinking, problem-solving, and research skills. Inquiry-based learning is a student-centered teaching method that encourages students to ask questions and investigate real-world problems. In this type of learning environment, students are actively engaged in the learning process and are given the opportunity to explore their natural curiosities. This type of learning is often hands-on and allows students to connect what they learn in the classroom and the real world. Inquiry-based learning has been shown to improve critical thinking skills, problem-solving skills, and creativity. **Inquiry based learning is teaching and learning method that prioritizes student questions, ideas and analyses.** To highlight the pedagogy's nuances, it is important to define inquiry-based learning from both a learner and teacher perspective. *From a student point-of-view,* *inquiry-based learning focuses on investigating an open question or problem. They must use evidence-based reasoning and creative problem-solving to reach a conclusion, which they must defend or present.* *From a teacher point-of-view,* *inquiry-based teaching focuses on moving students beyond general curiosity into the realms of critical thinking and understanding. You must encourage students to ask questions and support them through the investigation process, understanding when to begin and how to structure an inquiry activity.*

Steps of Inquiry based learning:

Following are the steps of Inquiry based learning:

1. Orientation,
2. Conceptualization,
3. Investigation
4. Conclusion
5. Discussion

Types of Inquiry based learning:

- **Confirmation Inquiry: You** give students a question, its answer and the method of reaching this answer. Their goal is to build investigation and critical-thinking skills, learning how the specific method works.
- **Structured Inquiry: You** give students an open question and an investigation method. They must use the method to craft an evidence-backed conclusion.
- **Guided Inquiry: You** give students an open question. Typically in groups, they design investigation methods to reach a conclusion.
- **Open Inquiry**: You give students time and support. They pose original questions that they investigate through their own methods, and eventually present their results to discuss and expand.

Regardless of the type, inquiry-based learning aims to develop students' abilities to analyze, synthesize and evaluate information -- indications of high-level thinking according *to Bloom's Taxonomy*.

Strategies and Tips for Implementing Inquiry-Based Learning:

- **Start with a question**
- **Allow for exploration**
- **Encourage discussion**

- Provide resources
- Summarize what was learned

Need and scope of Inquiry based learning:

The process of inquiry includes seeking knowledge through questioning. Inquiry-based learning makes use of this natural tendency. Students must ask questions, generate information and data**, and apply knowledge in new days, synthesize their findings and arrive at well supported conclusions.**

The Role of teacher in teaching by Inquiry based learning: In this method the teacher does not give readymade notes. He does not dominate the stage and lecture to the students. He becomes a spectator, guide and at the most a computer. He becomes a prompted to guide his students from the wing instead of coming to the forefront. He motivates and pricks the curiosity of the students and then goes into the background. Even then his role is very important in the following ways:

(i)He should make available all the responsive environments.

(ii) He should provide opportunity for developing further skills.

(iii) He should guide the learners at the different stages of solving problem.

(iv) He should make available reading material, pictures, diagrams and other teaching aids necessary for manipulating and exploring the given problem.

(v) The teacher should see that the learner does not become a parasite upon him. The students should not treat the teacher as ready-reckoner.

(vi) The teacher should allow the students to undergo various somersaults and to hit and get during the process of inquiry.

Use of Inquiry based learning as a strategy for teaching science:

- Inquiry teaching has a supplementary character. Inquiry Technique supplements the existing set of knowledge by throwing open flood-gates of knowledge to be picked in both hands by the students. The knowledge gained in this way is much more superior and everlasting than that got through the sermons of the teacher.
- Inquiry technique supplies impetus to work with double zeal. The students feel themselves in extra-ordinary high spirit with the topic. They take lessons just like play.
- Inquiry technique blesses the students with extra energy to face new challenges. This technique blesses the students with added strength to face all the challenges and vicissitudes during the lesson and discovery with stamina, vigour and joy.
- It is both rewarding and gratifying. It is only through this way of teaching that ever developing judiciously taught.
- Inquiry technique ensures sublimation of natural endow- ments. Inquiry technique helps it the sublimation of natural instincts.
- Besides being responsible for growth of civilization, spirit of inquiry infuses bits of good moral values. Inquiry technique helps to develop the spirit of co-operation, team spirit, mutual discussion, other good habits and sacred values which chisel a student into an honorable citizen.

Educational Implications:

- *Unfoldment of child's mind*: Teaching science through inquiry leads to unfoldment of child's mind. Curiosity is an innate urge of human beings. It has been responsible for all discoveries and inventions.

> *Supplementary character:* By throwing open flood-gates of knowledge to be picked by the students. Inquiry technique supplements the existing set of knowledge. This knowledge is superior and everlasting than that got through the sermons of the teacher.

> *Impetus to work with double zeal*: The students feel themselves in extraordinary high spirit with the topic. They take lessons just like play.

> *Extra energy to face new challenges*: This technique blesses the students with added strength to face all the challenges and vicissitudes during the lesson and discovery with stamina, vigour and joy.

> *Rewarding and gratifying:* It is only through this way of teaching that every developing subject likes science can be judiciously taught.

> *Sublimation of natural endowment:* Inquiry technique helps in the sublimation of natural instincts.

> *Moral values:* Inquiry techniques helps to develop the spirit of co-operation, team spirit, mutual discussion, other good habits and sacred values which chisel a student into an honorable citizen.

Conclusion: Innovative teaching methods can help to build better relationships between teachers and students by creating an effective environment that encourages exploration and collaboration. The use of innovative teaching methods has the potential to revolutionize the way we teach our students. Inquiry-based learning is a student-centered teaching method that encourages students to ask questions and investigate real-world problems. In this type of learning environment, students are actively engaged in the learning process and are given the opportunity to explore their natural curiosities. They learn a skill set that will support them in academia and the workplace, including oral communication, leadership skills, self-management, critical thinking, problem-solving, and creativity.

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TRANSFORMING LEARNING IN THE DIGITAL AGE: OPPORTUNITIES, OBSTACLES, AND SOLUTIONS

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Abstract

This paper aims to highlight the opportunities, obstacles, and solutions to the digital education. Population wise India is the biggest country in the world. Digital technology and usage of technology in education are the needs of the hour. Digital education has a larger impact on the teaching and learning process. India is a country, where, in its total population, 68% lives in villages. As a result, digital education is slowly entering rural areas, but there are a lot of problems in implementing digital education in rural areas. Mainly basic infrastructure, like electricity, internet connectivity, and skilled teachers' scarcity, is the main problem to achieve digital education in India. Amidst obstacles, there are a lot of opportunities to achieve digital education in India. This paper aims to highlight the obstacles, opportunities, and solutions to the use of smart classes in secondary schools in the Uttara Kannada district of Karnataka.

Key words: smart class, digital education, digital age, Uttara Kannada district

Introduction: "There must be an industrial revolution! In which educational science and the ingenuity of educational technology combine to modernise the grossly inefficient and clumsy procedures of conventional education." Sydney L. Pressly (1924) In the olden days only privileged groups of people used to get education, this indigenous education was imparted at home, basadis, temples, chatuspadis, and gurukulas. In the pre-Independence period, teaching was only in oral form, and during the British period, the invention of the printing machine made drastic changes in the field of education, as a result, it revolutionised changes in the teaching and learning process. and knowledge has been spread widely and made education accessible for all. In the post-independence period, audiovisual aids like radio, tape recorder, film strips, overhead projects, charts, maps, etc. started being used in learning. In the year 1961, by establishing the National Council for Educational Research and Training, it played a very important role in promoting and developing educational materials and multimedia resources for the teachers. In the 1960-70 educational radio program were started with the help of Aakashavani to bring awareness and basic literacy among the people. Later on, satellite programs started to broadcast educational programs. In the 1980s and 90s, the introduction of computers into the field of education drastically helped students and teachers. Educational software, the introduction of information and technology, and using digital tools enhanced teaching and learning. In the year 2010 to now, many schools started using smart classrooms with digital white boards, projectors, and educational software. Smart classrooms allowed for interactive learning experiences, where audio-visual aids and multimedia resources enhanced the teaching process. It has a larger impact on students and teachers, smart class made teaching easier for teachers, and it also made the students more interesting. Though smart classes have a high impact on students and teachers, it has some obstacles in implementing them in many schools and across the geographical area. Cost of devices prices in areas, also very high, in rural areas, internet connectivity and power supply are a major challenge, skilled teachers' availability and technical issues are the major problems in implementing smart classrooms. Although there are plenty of solutions to these obstacles to over.

Objectives of the study:
1. To study the challenges faced by the teachers in using smart classrooms.
2. To study the opportunities and solutions to the problems faced by teachers using smart classrooms.

Review of related literature:

Turel, Y. K., & Johnson, T. E. (2012). Conducted study on **'**Teachers' Belief and Use of Interactive Whiteboards for Teaching and Learning'. The findings of the study demonstrate that based on the perceptions of teachers who were active IWB users. For better understanding and interpretation of teachers' perceptions, it is important to represent their background, as shown in this study, regarding IWB use. including the frequency of IWB use, IWB competency, sources of IWB skills, and demographics.

Smith et al. (2020) highlight the role of smart classrooms in promoting critical thinking and problem-solving skills. Their findings indicate that students who learned in technology-enhanced environments were more likely to apply critical thinking strategies compared to those in traditional settings. As a result, there is growing evidence that smart classrooms contribute not only to improved academic performance but also to the development of essential skills for the 21st century.

Kumar (2019) found that the use of smart technologies, such as interactive whiteboards and digital tools, led to improved retention of complex subjects like mathematics and science.

Methodology:

Success of educational research depends on the methodology. The investigator intended to know the status of smart classroom impact in the teaching and learning process.

1. **Population**

   The population of the present study involved all the teachers of secondary schools using smart classroom systems in teaching.

2. **Sample:** 69 teachers from different in secondary schools in Uttara Kannada district, that are using smart classroom system in teaching learning.

	Male	Female	Total
No. of teachers	34	35	69

3. **Tools used:**

   Self-constructed "Smart Classroom Usage and Challenges in secondary Schools" is used to collect the data. The characteristics have been well established.

4. **Data collection:**

   The data was collected by using a simple random method. The teachers who were selected, are using smart classrooms in their teaching regularly are the population.

Findings of the study:

1. 53.62% of teachers use smart class room several times in week.
2. 44.92% of teachers are using interactive white board in teaching.
3. 56.52% of teachers are facing internet connectivity in using smart classrooms.
4. 42.02 % of teachers are using videos in smart classrooms.
5. 57.97% of parents have positive feedback in using smart classrooms.

Educational implications of the study:

On the basis of the findings, the following implications can be identified from the present study:

1. Smart classrooms can be used regularly in the teaching and learning process.
2. Interactive white board have larger impact on the students.
3. Interconnectivity is the major problem in using smart classrooms, so that has to be addressed.
4. Every school management is supporting the use of smart classrooms, so it can be expanded to all the schools.
5. All the teachers are very happy in using smart classrooms, so with the proper training it can be used in every schools.
6. Majority parents are supporting use of smart classrooms, so it can be used all the private and government schools as well.

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CHALLENGES AND OPPORTUNITIES IN DIGITAL EDUCATION: A PATH FORWARD

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Abstract

Digital education has revolutionized learning, offering new paradigms for both educators and students. This article examines the dual facets of digital education, highlighting its significant challenges and abundant opportunities. Key challenges include issues of access and equity, content quality, student engagement, assessment methods, and the need for teacher training and support. Conversely, the opportunities presented by digital education encompass increased flexibility and accessibility, personalized learning experiences, global learning communities, innovative teaching tools, and data-driven insights. By addressing these challenges and harnessing the opportunities, stakeholders can foster an equitable and effective digital learning environment. Ultimately, collaboration among educators, policymakers, and communities is crucial in navigating this evolving landscape and shaping the future of education.

Keywords: Digital Education, Educators, Students, Challenges and Opportunities of Digital Education.

Background of the Study: The rise of digital education has fundamentally altered the educational landscape, especially accelerated by the COVID-19 pandemic, which necessitated a rapid shift to online learning environments (Hodges et al., 2020). This transformation highlights both the promise of technology in enhancing educational access and the persistent challenges that educators and students face. Digital education encompasses a variety of learning modalities, including online courses, virtual classrooms, and hybrid models, all of which can potentially democratize learning by breaking down geographical and socio-economic barriers (Zawacki-Richter et al., 2019). However, the digital divide remains a critical concern, as millions of students in underserved communities lack reliable internet access and adequate devices (Beaunoyer et al., 2020). This inequity can exacerbate existing disparities in educational attainment and opportunity, raising urgent questions about how to create inclusive digital learning environments. Moreover, the sheer volume of digital content available poses challenges regarding the quality and credibility of educational resources. Educators must navigate a complex landscape to identify reliable materials that align with curricular standards (Wang et al., 2020). Engagement and motivation also present hurdles; the lack of in-person interaction can lead to diminished student involvement, making it essential for educators to adopt innovative strategies that foster a sense of community and connection (Gonzalez et al., 2020). Conversely, digital education offers significant opportunities, such as increased flexibility for learners, personalized learning experiences through adaptive technologies, and access to global learning communities that enrich educational perspectives (Guri-Rosenblit, 2020). As educators leverage these opportunities, the integration of data-driven insights can enhance instructional practices and support student success (Siemens & Long, 2011). According to UNESCO, digital education is the integration of technology into the educational process to enhance teaching and learning experiences, providing access to resources and opportunities that may not be available through traditional means. The European Commission defines digital education as a comprehensive approach to using digital technologies in

education, aiming to improve learning outcomes, enhance teaching practices, and prepare learners for a digital society. Educause describes digital education as the use of digital tools and resources to create, deliver, and manage educational content, enabling innovative pedagogical practices and fostering collaboration among students and educators. The World Economic Forum emphasizes that digital education involves not only the use of technology for instruction but also the development of digital literacy skills necessary for students to thrive in a technology-driven world. Digital education refers to the use of digital technology and electronic media to facilitate learning and teaching. It encompasses a wide range of formats, including online courses, virtual classrooms, and hybrid models that blend traditional and digital learning methods. This study aims to explore these challenges and opportunities, providing a comprehensive analysis that can inform educators, policymakers, and stakeholders in their efforts to optimize digital education.

Challenges and Opportunities in Digital Education: Digital education has transformed the landscape of learning, creating a new paradigm for educators and students alike. While it presents numerous advantages, it also brings significant challenges that must be addressed to maximize its potential. This article explores both the challenges and opportunities inherent in digital education.

Challenges in Digital Education

1. Access and Equity: The digital divide remains a critical barrier to effective digital education. Many students, particularly in low-income and rural areas, face challenges such as inadequate internet access and a lack of necessary devices. According to Beaunoyer et al. (2020), this disparity exacerbates educational inequalities, preventing equitable participation in digital learning environments. As a result, students from underserved communities often miss out on vital educational opportunities, creating significant gaps in academic achievement.

2. Quality of Content: The vast array of online resources presents both opportunities and challenges. Not all digital content is created equal; educators must sift through a plethora of materials to identify those that are credible and pedagogically sound. Wang et al. (2020) highlight that the lack of standardization and quality assurance in online resources can lead to misinformation and ineffective learning experiences. Ensuring that digital content meets established educational standards is essential for fostering meaningful learning outcomes.

3. Engagement and Motivation: Student engagement in online environments is a persistent challenge. The absence of face-to-face interaction can lead to feelings of isolation, which can hinder motivation and participation (Gonzalez et al., 2020). Furthermore, distractions present in home settings can detract from a student's ability to focus on their studies. Educators must therefore employ innovative strategies, such as interactive learning activities and community-building initiatives, to enhance engagement and create a supportive virtual learning environment.

4. Assessment and Feedback: Traditional assessment methods often do not translate well to digital platforms, creating challenges for educators in accurately measuring student learning. Concerns about academic integrity are heightened in online assessments, making it crucial for educators to design assessments that not only evaluate knowledge but also promote learning (Hodges et al., 2020). Providing timely and constructive feedback in a digital context is also essential for student development and can be more challenging compared to in-person assessments.

5. Teacher Training and Support: Many educators lack the training and resources necessary to effectively teach in digital environments. According to Zawacki-Richter et al. (2019), professional development focused on digital pedagogy is critical for equipping teachers with the skills required to

navigate and leverage technology in their teaching practices. Ongoing support and resources are vital for ensuring that educators can adapt to the evolving demands of digital education.

Opportunities in Digital Education

1. Flexibility and Accessibility: Digital education offers unprecedented flexibility, allowing students to access learning materials and complete assignments at their own pace. This flexibility is particularly beneficial for non-traditional students, such as working professionals and parents, who may struggle to attend conventional classes (Guri-Rosenblit, 2020). By accommodating various learning styles and schedules, digital education can enhance overall educational accessibility.

2. Personalized Learning: Technology facilitates personalized learning experiences through adaptive learning platforms that can tailor content to meet individual student needs. These platforms can analyze student performance and adjust the curriculum accordingly, thereby enhancing understanding and retention (Siemens & Long, 2011). Personalized learning approaches can lead to improved educational outcomes, particularly for diverse learners who may require different instructional methods.

3. Global Learning Communities: Digital education transcends geographical boundaries, enabling students to connect with peers and experts from around the world. This global perspective enriches learning experiences and fosters cultural exchange, preparing students for an interconnected world (Gonzalez et al., 2020). Collaborative projects and discussions across borders can deepen understanding and encourage the sharing of diverse viewpoints.

4. Innovative Teaching Tools: The digital landscape is abundant with innovative tools that enhance teaching and learning. From interactive simulations to multimedia presentations, technology can make learning more engaging and effective (Guri-Rosenblit, 2020). Educators can leverage these tools to create dynamic and immersive educational experiences that cater to various learning preferences.

5. Data-Driven Insights: Digital education platforms generate valuable data regarding student performance and engagement. This information can inform instructional practices, allowing educators to identify areas for improvement and tailor interventions to meet student needs (Zawacki-Richter et al., 2019). By utilizing data analytics, educators can foster a more responsive and effective learning environment that supports student success.

Conclusion: Digital education presents a complex landscape filled with both significant challenges and remarkable opportunities. As the shift towards online and hybrid learning models continues to evolve, it is crucial to address the barriers of access and equity that many students face. Ensuring reliable internet access and quality digital resources is essential for creating an inclusive educational environment. Moreover, the need for effective engagement strategies, innovative assessment methods, and robust teacher training cannot be overstated. Educators must be equipped with the skills and tools to navigate this new landscape, fostering engagement and promoting meaningful interactions among students. On the other hand, the advantages of digital education are profound. The flexibility and accessibility it offers can transform learning experiences, particularly for non-traditional students. Personalized learning through adaptive technologies can cater to individual needs, while global connectivity enriches the educational experience by facilitating cross-cultural collaboration. As stakeholders in education—educators, policymakers, and communities—work together, embracing the potential of digital tools and data-driven insights will be vital. By addressing the challenges and leveraging the opportunities inherent in digital education, we can pave the way for a more equitable, engaging, and effective learning environment for all students. The future of education is not just about

technology; it's about how we use that technology to create inclusive and meaningful learning experiences.

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INNOVATIVE TEACHING STRATEGY: SYNECTIC MODEL OF TEACHING, A PERSPECTIVE

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Abstract

Education, in today's rapidly changing world has put forth many demands and challenges in front of the educators. As a solution to this innovative teaching strategies have emerged. Introducing new teaching strategies proactively into the classroom is innovative teaching. Innovation in teaching helps students to attain their full potential. One such innovative teaching strategy is synectic model of teaching, which uses metaphor and analogy based techniques to encourage the use of divergent and convergent thinking to connect unfamiliar and familiar concepts. It is basically a creative thinking strategy that helps the students to understand the concepts in depth and foster higher order thinking, thus ensuring student-centred learning. This paper focuses on the theoretical foundation of synectic model of teaching, its strategies and application in educational context. This model of teaching not only stimulates imaginative thinking, it also enhances problem solving ability in students. Ultimately one of the main aim of education is to develop critical thinking and problem solving ability in the students which this model of teaching accomplish.

Keywords: Synectic model, teaching strategies, analogical reasoning, metaphorical thinking, creativity, student-centred learning.

Introduction: The Synectics Model of Teaching, created by William J.J. Gordon in the 1960s, is an innovative approach designed to stimulate creative thinking and problem-solving in educational settings. Grounded in the idea that creativity can be taught and enhanced, this model encourages students to use analogies and metaphors to view problems from unconventional perspectives. By guiding learners through a structured process of analogical thinking, the Synectic model helps them connect seemingly unrelated ideas, fostering deeper understanding and promoting the development of original solutions. Unlike traditional teaching models that focus on linear thinking and memorization, Synectics emphasizes the importance of imagination and emotional engagement, making it an effective tool for nurturing creativity and critical thinking skills in students. By using metaphors and analogies to make abstract connections between seemingly unrelated concepts, the model encourages out-of-the-box thinking.

History of Synectic Model in Education: The Synectics Model of Teaching was developed by William J.J. Gordon and his colleagues in the 1960s. The word "synectics" is derived from the Greek word "synectikos," meaning "the bringing together of different elements." This model emphasizes the use of creative thinking and metaphoric thinking to solve problems and stimulate new ideas. Gordon was an industrial consultant who noticed that successful problem solvers often relied on analogies and metaphors to generate new ideas. He formalized this process, believing that creativity could be taught through structured exercises. Gordon published his book, Synectics: The Development of Creative Capacity, which outlined his ideas about creativity and the role of emotional and irrational thinking in solving problems. He argued that creative processes could be better understood and taught by using

structured techniques. In the decades that followed, variations of the synectic model were adapted to different educational and professional contexts. It remains a widely respected model for teaching creative thinking and is used in many classrooms and professional environments focused on creative problem-solving.

Orientation to the Model: The Synectic Model of teaching uses metaphor and analogy as the process of Synectics for bringing different elements together in a search of new ideas or solutions.

Metaphor in Synectics: A metaphor is a figure of speech that describes one thing by saying it is another, highlighting similarities between two seemingly unrelated concepts. In synectics, metaphors encourage learners to think imaginatively and explore new perspectives.

Example of Metaphor in Synectics: A teacher might say, "Ideas are like seeds. They need nurturing to grow." This metaphor helps students understand the process of developing ideas, implying that patience and care are needed, just like with seeds.

Analogy in Synectics: An analogy is a comparison between two things based on their similarities, often used to explain something complex by relating it to something more familiar. Analogies are more structured than metaphors and emphasize specific, logical connections between concepts.

Types of Analogy in Synectics:

Direct Analogy: Compares two similar things directly, such as comparing the structure of a business to the structure of an ecosystem.

Personal Analogy: Encourages learners to "become" the object or concept being studied, fostering empathy and deeper understanding.

Fantasy Analogy: Uses imaginative, often unrealistic comparisons to stimulate creative solutions.

Symbolic Analogy or compressed conflict: Uses paradoxes or contradictions to provoke deeper thought, such as describing "war" as a dance between life and death.

Example of Analogy in Synectics: A teacher might use the analogy, "The brain is like a computer," to help students understand how the brain processes information, stores memories, and performs tasks, drawing parallels to how a computer operates.

Synectic Model of Teaching

The Composition of Synectics Model of Teaching comprises of the following:

- ●Syntax,
- ● Social System,
- ●Principle of Reaction, and
- ●Support System.
- ●Instructional and Nurturant Effects

☆*Syntax of Synectics Model:* Synectics procedure is based on two strategies. One of the strategies focusses on making familiar strange- it uses old ideas, and problems using analogical thinking creatively to derive new ideas, and solutions to problems through six phases. The other strategy focusses on meaningful ideas from entirely unfamiliar ideas through the process in seven phases. Objectives of both the strategies, their syntax and principle of creation differs from each other.

A. Syntax of Strategy One (Making Familiar Strange)

It has six phases in its syntax, provided in detail under the following headings-

i) Phase One: Describe the current conditions

The teacher asks the students to describe a situation or topic as they see it in the present context.

ii) Phase Two: Direct Analogy

At this phase, students suggest a number of direct analogies related to the topic of discussion at phase I. At the end of this phase, they choose one analogy from the responses to be discussed in the phase three.

iii) Phase Three: Personal Analogy

Students select a direct analogy from the analogies discussed at phase II, they create a personal analogy with that.

iv) Phase Four: Compression Analogy (Compressed Conflict)

Students use their descriptions from phase two and three and suggest some conflict analogies, and at the end of this phase, they choose one analogy to be discussed in the phase five.

v) Phase Five: Direct Analogy

Students make and choose another direct analogy on the basis of the analogy discussed of the compressed conflict at phase IV.

vi) Phase Six: Re-examination the original task

The teacher asks the students to go back to the task, topic, or the original problem by using the last analogy or the whole analogy. And understand the conceptual difference between the beginning and the closing analogy created through the phrasal process.

B. Syntax of Strategy Two (Making Strange Familiar)

It has seven phases in its syntax, provided in detail under the following headings-

i) Phase One: Substantive Input

Teachers shares information on and initiates a discussion on new topics.

ii) Phase Two: Direct Analogy

Students suggest a direct analogy related to the topic and describe it.

iii) Phase Three: Personal Analogy

Students create a personal analogy with the direct analogy selected at phase two.

iv) Phase Four: Comparing Analogy

Students identify and explain the points wherein they find similarity between the selected topic at the phase I at the beginning of the phrasal process and the direct analogy.

v) Phase Five: Explaining the differences

Students explain why the analogy they made does not match with the chosen (new) topic.

vi) Phase Six: Exploration

Students re-explore the original topic on its own terms.

vii) Phase Seven: Generating an Analogy

Students present their own direct analogy and explore further similarities and differences.

✮ *Social System:*

The role of a teacher is more of a facilitator in both the moderately structured strategies. Here, the teacher initiates the sequence and guides the students through the operational mechanisms. Open ended discussions give ample freedom through engaging them to explore different perspectives in metaphoric problem solving. Teacher sets the classroom environment for creative problem solving by instructing students to follow certain norms of cooperation, play of fancy, and intellectual & emotional equality. There no punishment, only internal reward for the students in the form of satisfaction and pleasure of creative achievement with the learning activity.

✬ *Principle of Reaction:* Generally, education system expects a certain conservative response towards problems from teachers and students. While the Synectics allows students to share irrelevance, fantasy, symbolism and other responses by thinking beyond the set patterns. It also expects the teacher to accept the most bizarre and unusual expressions from the students without being judgemental to allow freedom of creative thought. Acceptance of astonishing and unbelievable analogies is proportional to the intensity of the problem in order to develop fresh perspectives. Similarly, in strategy two, teachers are expected to follow a non-judgemental approach and, hence, guarding against premature analyses. Teachers' role is to clarify the process of the learning activity and summarize the progress regarding the problem-solving behaviour of the students.

✬ *Support System:* Synectics require a competent teacher in synectics procedures for facilitation of both the strategies. It needs a work space and an environment wherein creativity can foster. Though a normal class size can be a hindrance, so the Synectics suggests a class smaller in size than usual. In case of scientific problems, synectics require a laboratory for concrete solutions and practical inventions.

✬ *Instructional and Nurturant Effects :* The model also creates Instructional and Nurturant Effects of using it as an instructional approach in the classroom. The syntax followed in both the strategies add instructional as well as nurturant effects.

Instructional Effects: These are the immediate, measurable learning outcomes that result directly from the teaching process. In the synectic model, instructional effects are tied to the acquisition of specific skills and knowledge through engagement with creative problem-solving processes.

Nurturant Effects: These are the long-term, indirect outcomes that go beyond specific skills or knowledge. Nurturant effects involve the development of attitudes, dispositions, and personal growth fostered by the teaching process.

Benefits of Synectic Model:
▪ Synectics provides a free-thinking state of consciousness and stimulates creative thinking.
▪ Synectics helps participants move their thinking from the literal to non-literal.
▪ Synectics mobilises both sides of the brain, the right brain and the left brain.
▪ Synectic trigger mechanisms unlock rigid thinking patterns and catalyse new thoughts, ideas and inventions.
▪The technique creates an atmosphere of humour and play and ensures high involvement of participants in the creative process.
 ▪ Every individual can freely use Synectics techniques and develop imagination and insight into everyday activities.
▪ Synectics is designed to increase the creativity of both the individuals and groups. Sharing the Synectics experience can build a feeling of unity among students. Students learn about their fellow classmates as they watch them react to an idea or problem. Thoughts are valued for their potential contribution to the group process.
▪ Synectics procedures may be used with students in all areas of the curriculum, the sciences as well as the arts. They can be applied to both teacher-student discussion in the classroom and teachers' to made materials for the students.
▪ It helps to break set and conceptualize the problem in a new way in order to suggest fresh approaches to personal life as well as in the classroom. Social relations in the classroom, conflict resolution, how

to overcome subject anxiety, how to feel better about wearing glasses, how to stop making fun of people- the list is endless.

▪ Synectics can also be used to create a product or design. A product is something tangible, such as painting, a building, or a bookshelf, whereas a design is a plan, such as an idea for a party or a new means of transportation. Eventually, designs or plans become real, but for the purposes of this model they remain as sketches or outlines.

▪ The model often works effectively with students who withdraw from more ―academic learning activities because they are not willing to risk being wrong. Conversely, high-achieving students who are only comfortable giving a response they are sure is ―right‖ often feel reluctant to participate. We believe that for these reasons alone, Synectics is valuable to everyone.

Challenges of Synectic Model:

In addition to the benefits described above, the synectic learning model also has the following challenges :

▪This learning model is difficult to implement for teachers and students who are used to implementing conventional learning patterns because this model focuses on reflective and imaginative thinking. In activities that occur in certain situations, there will be a possibility that students lack mastery of facts and procedures in carrying out skills.

▪This model requires teachers to be able to position themselves as initiators and mentors, but many teachers certainly do not have this.

▪It takes quite a long time because students have to respond step by step to these learning steps.

Conclusion: In conclusion, the Synectics Model of Teaching offers a powerful framework for fostering creativity, critical thinking, and problem-solving skills in students. By utilizing analogies and metaphors, it encourages learners to break free from conventional thought patterns and explore ideas from fresh, imaginative perspectives. The model not only enhances cognitive development but also nurtures emotional intelligence, collaboration, and open-mindedness. As an innovative teaching approach, Synectics prepares students to tackle complex challenges with creativity and confidence, making it a valuable tool in modern education for developing lifelong learners and thinkers.

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CREATIVITY AND INTELLIGENCE AMONG SECONDARY SCHOOL STUDENTS – A STUDY

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Abstract

Emotion of well-being and pleasure can be knowledgeable through creativity. One can take happiness in being creative for the sake of examination and discovery which has over generations improved human society's capability to stay alive in this impulsive globe, or one can put into practice creativity in the search of day to day activities or at work. Hence creativity is a major construct for promoting happiness. Is creativity associated to intelligence? The connection between creativity and intelligence has been subject to experimental research for decades yet there is no conformity on how these constructs are related. Therefore the main aspire of this research was to study to identify the level of creativity; to study the significant association between creativity and intelligence and to study the significant difference between secondary school boys and girls in Mysore south zone. In the present study survey method was adopted and purposive sampling techniques was employed, the total sample for the study was 60 out of which 30 boys and 30 girls. Present study recognized the ways and means of enhancing creativity and intelligence among secondary school students; revealed that there is a significant difference between secondary school boys and girls in their creativity; there is no significant difference between boys and girls in their intelligence and positively correlates between creativity and intelligence.

Keywords: Creativity, intelligence, secondary schools, well-being, happiness

Introduction: In educational research, the word *'creativity'* which is only seventy years old, has shifted its source from heavenly to psychic functioning of individuals. Of course, human beings are gifted with unique powers. And Intelligence is the collective capacity of individual to act with determination, to think sensibly and to deal effectively with his/her surroundings. It can be called as the capacity to get hold of knowledge. In order to resolve any problem, knowledge should be functional in the right manner with the help of intelligence. Educationists believed that intelligence as the mental aptitude which helps the human beings to think about miniature, complex and conceptual matters, to adjust with altering situations by solving a range of problems as quickly as possible, to obtain with ease knowledge, expertise and aptitude in diverse subjects, to explain new situations with the help of previous experience, to arrive at conclusions by influential the exact relationships between various essentials, to utilize our energy by keeping the emotions and desire under control whenever essential in achieving the goal.

Need and significance of the study: On the connection between intelligence and creativity, one classic theory that has persisted in the literature is that intelligence is essential but not enough for creativity (Guilford, 1967; Mackinnon, 1962). The relationship between creativity and intelligence has been the matter of significant; In this regard many research findings and observations have established that there is no positive correlation between creativity and intelligence. One is not the necessary requirement of the other. Those originate scoring high on intelligence tests might reveal no signs of creativity where as human beings performing inadequately in intelligence tests may sometimes generate something very original. There has been discussing in the psychological literature about whether intelligence and creativity are fraction of the same process (the conjoint hypothesis) or represent different mental

processes (the disjoint hypothesis). Substantiation from attempts to look at correlations between intelligence and creativity from the 1950s beyond, by authors such as *Barron, Guilford or Wallach and Kogan,* regularly recommended that correlations between these concepts were little sufficient to justify treating them as different concepts. Some investigators believe that creativity is the result of the same cognitive processes as intelligence, and is only judged as creativity in stipulations of its consequences, i.e. when the result of cognitive processes happens to create something novel, a view which Perkins has termed the 'nothing special' premise. Decades of investigate link creativity with the inherent motivation to learn. When students are paying attention on a creative goal, they become more engrossed in their learning and more ambitious to acquire the skills they require to achieve it. Creative work helps learners attach new information to their previous knowledge. Educators who regularly assign class work involving creativity are supplementary likely to scrutinize higher-order cognitive skills — problem solving, critical thinking, making relations between subjects — in their students. And when teachers merge creativity with transformative knowledge use, they see even enhanced outcomes. Intelligence positively plays a part in creative thinking, Intelligence quotient is usually gauged by an aptitude to interpret information and give solutions, no substance the situation. If you are immense at acquiring knowledge(all the way through reading or lectures or watching videos on you tube) and you have the capability to put that knowledge to use efficiently , but lack the capability to effectively sift through solutions, may come up with efficient ideas, but it going to get you a long time. As opposed to those with high intelligence levels who can filter through ideas rapidly. Intelligence only gets you so distant when it comes to creativity. Plentiful creative problems strongly draw on verbal abilities and general knowledge. Crystallized intelligence was originated to show superior correlations with precise measures of creative potential than other mechanism of intelligence.

Reviews of related literature: Plentiful research has been conducted on relationship and other related variables between creativity and intelligence, some of them, a research revealed that how creativity affects academic achievement and intelligence among secondary school students. Liane-Gabora (2013) revealed that a human being can be incredibly smart but not terribly creative, or highly creative but not terribly smart and suggests that the relationship between the two is more multifaceted; clearly it depends on how the constructs of creativity and intelligence are being considered. Lawrence (2013) originate that there is no significant difference between intelligence and academic achievement of secondary school students. Hossein (2011) found that it is essential to take the role of intelligence beliefs into account when studying academic performance. Jones (2011) found that many secondary school students believed that intelligence was impressionable.Riggon, Dutta. Jadab and Soni. J. C. (2016) conducted a study on 'Intelligence, Creativity and scholastic Achievement of Secondary School Students of Arunachal Pradesh', revealed that there is a positive relation between creativity, intelligence and academic achievement among secondary school students; Reilly et al (2017) study on identifies creative teaching and its impact on students and colleagues; revealed that Creative educators should be alert of this fact and then reflect on their teaching; Dutta. Jadab and Chetia Pranab (2018), conducted a study on 'creativity of secondary school students in Lakhimpur districts of Assam' findings revealed that there was no significant mean difference on creativity with reference to gender and type of schools of secondary school students of both the districts of Assam. In this way many research studies have been done related to creativity and intelligence and other related variable but a very few research studies are done especially in the state of Karnataka, therefore the present study is very significant to conduct

a research aims to study the level of creativity, difference between boys and girls and relationship between creativity and intelligence among secondary school students of Mysore south zone..

Objectives

1. To study the level of creativity among secondary school students of Mysore city south zone
2. To study the difference between secondary school boys and girls in their creativity
3. To study the difference between secondary school boys and girls in their intelligence
4. To study the significant relationship between creativity and intelligence among secondary school students

Hypothesis

1. There is no significant difference between secondary school boys and girls in their creativity
2. There is no significant difference between secondary school boys and girls in their intelligence
3. There is no significant relationship between creativity and intelligence among secondary school students

Operational Definition of key terms

➢ **Creativity** – Creativity is the act of turning new and imaginative ideas into reality. Creativity is characterized by the capability to distinguish the world in new ways, to find hidden patterns, to make connections between seemingly unrelated phenomena, and to generate solutions.

➢ **Intelligence** – According to David Wechsler "intelligence is the aggregate or global capacity of the individual to act purposefully, to think rationally, and to deal effectively with his environment".

➢ **Secondary schools** – Secondary school (classes 8-10) which caters to the student population of 14-16 age-group

Methodology

➢ **Variables** – the following variables are used for the present study,
   a) *Dependent variables* – Creativity and Intelligence
   b) *Independent variables* – Gender

➢ **Design of the study** – The present study is descriptive in nature. It is a survey method were used for collecting data on creativity and intelligence among secondary school students of Mysore south zone.

➢ **Sample of the study** – The sample was drawn through purposive sampling technique was used. The researcher selected secondary school 30 boy students and 30 girl students of Mysore south zone.

➢ **Tools used** – two non-verbal tools were used to collect the data for the present study
   a) *Creativity* – by Baqer Mehdi. This test consists of 3 activities picture construction activity, incomplete figure activity and triangles and abbreviations activity. Scores were given on the basis of elaboration and originality of the item for each activity. Reliability of creative thinking test is 0.94.
   b) *Intelligence* – Raven's standard progressive matrices (SPM), this scale consists of 60 items presented in 5 sets with 12 items per set. The problems become gradually more difficult as the test taker takings through the problems in the test. Internal reliability for standard progressive matrices is 0.88

➢ **Statistical Techniques to analyse the data** – Mean and SD were calculated in descriptive statistics and 't' test was used as statistics to assess the hypothesis of the present study.

Analysis and Interpretation of the data

Objective 1: To study the level of creativity among secondary school students of Mysore south zone

Table 1

Level of creativity among secondary school students

Sl.No.	Score	No. of students	Level of Creativity
1	169 and above	28	Highly Creative
2	131-168	15	Moderately Creative
3	130 and below	17	Low Creative

Figure 1

Percentage of total number of students with degree of creativity
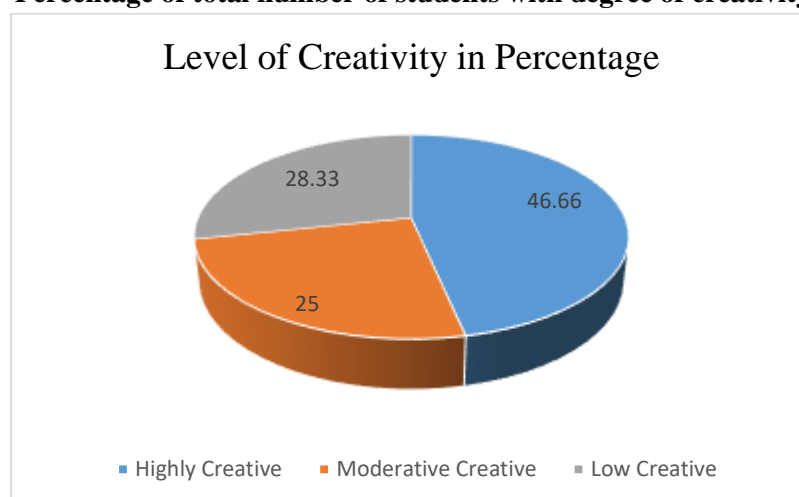
From table 1 and figure 1 shows that, 28 (46.66 %) out of 60 students they are highly creative and 15 (25 %) students are moderately creative and 17 (28.33 %) students are low creative respectively. In general compare to girls, boys are highly creative in their scholastic achievement. The percentage of highly creative students are highest.

H1: There is no significant difference between secondary school boys and girls in their Creativity

Table 2

Details mean scores of secondary school boys and girls in their creativity

Variable	Gender	Mean	SD	t	Significant level
Creativity	Boys	87.69	9.07	2.09	Significant at 0.05 level
	Girls	92.78	9.88		

Figure 2

Significance difference between secondary school boys and girls in their creativity
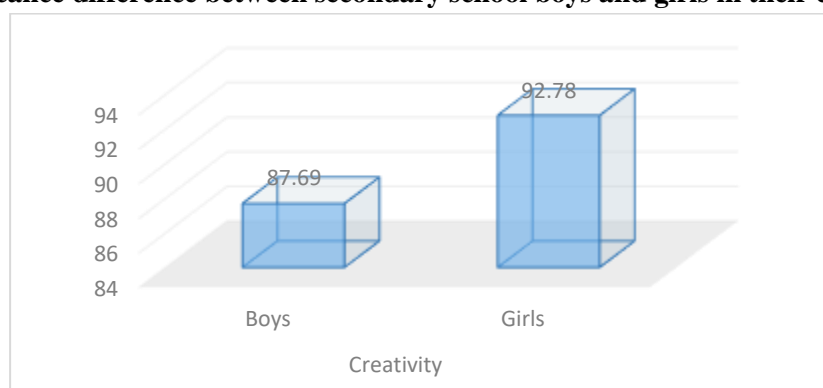
Table 2 and figure 2 represents, the mean scores of creativity of secondary school boys and girls. The mean score boys is 87.69 and girls 92.78 respectively and the t-value in creativity is 2.09 that is significant at 0.05 level. And concluded that hypothesis 1 is rejected and stated there is a significant difference between secondary school boys and girls in their creativity. Compared to boys girls found more creative than boys.

H2: There is no significant difference between secondary school boys and girls in their Intelligence

Table 3

Details mean scores of secondary school boys and girls in their Intelligence

Variable	Gender	Mean	SD	t	Significant level
Intelligence	Boys	36.27	7.48	0.20	Not significant
	Girls	35.08	5.80		At 0.01 and 0.05 level

Table 3 clearly indicates that, the mean scores of intelligence among secondary school boys and girls in their intelligence. The mean scores of boys is 36.27 and girls is 35.08 and the 't' value is 0.20 that is not significant at both 0.01 and 0.05 levels. Hence the null hypotheses 2 is accepted and concluded that, there is no difference between secondary school boys and girls in their intelligence and girls does not differ in intelligence.

H3: There is no significant relationship between creativity and intelligence among secondary school students

Table 4

Correlation between creativity and intelligence of secondary school students

Variable	Mean	SD	Correlation
Creativity	95.94	12.23	1.00
Intelligence	36.24	4.11	

Table 4 shows that, the product moment correlation between creativity and intelligence of secondary school boys and girls was calculated and data revealed that the relationship between two construct is highly positive. And concluded that there is perfectly 1.00 correlation exists between creativity and intelligence of secondary school boys and girls.

Findings of the study

- The percentage (46.66 %) of highly creative students are highest in their creativity
- There is a significant difference between secondary school boys and girls in their creativity and Compared to boys girls found more creative.
- There is no significant difference between secondary school boys and girls in their intelligence.
- There is perfectly 1.00 correlation exists between creativity and intelligence of secondary school students.

Conclusion: The mechanism of successful intelligence influence positively on academic achievement and learning. Successful intelligence can be used to teach diverse subjects in schools. Teaching for successful intelligence is cooperative to all students with different education patterns and it enhances effectiveness and level of performance among students. And Creativity is universally widespread and each and every child has some degree of creativity. It is the duty of parents and teachers to provide support for creative development and help the child to understand the divergent thought and to communicate his ideas freely. They should give favorable experiences and guidance and should recognize the individual's creative aptitude.

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TOOLS AND TECHNIQUES FOR DIGITAL ASSESSMENT IN SCHOOL EDUCATION

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Abstract

The emergence of digital assessment has not just modernized but revolutionized traditional methods of evaluating student performance, making it an integral part of contemporary school education. As technology continues to permeate education systems worldwide, digital assessment technologies empower instructors with unprecedented flexibility, efficiency, and customization in gauging learning outcomes. This abstract delves into the primary instruments and methods for digital assessment in educational settings, with a focus on their benefits, drawbacks, and potential for enhancement.

Digital technologies have changed several aspects of education, most notably how student learning is assessed. Digital assessment instruments offer student performance evaluation methods that are not only interactive and adaptable but also highly scalable. This scalability allows educators to efficiently assess large groups of students. This overview describes the main instruments and methods used in education to improve the efficiency, accuracy, and personalization of digital assessments in the classroom.

Key Words: Digital Assessment, Digital Evaluation and Inclusivity

Introduction: The digital revolution of the twenty-first century has impacted almost every industry, and education is no different. Traditional teaching methods, mainly how student performance is evaluated, have undergone significant changes due to the quick integration of technology into learning environments. A new aspect of educational technology called digital assessment is altering how schools gauge the success of their students' learning. These tests use digital tools and methodologies that improve assessments' accuracy, adaptability, and interactivity while offering a more profound understanding of students' competencies and learning requirements. Paper-based exams, quizzes, and assignments have traditionally been the go-to for school assessments. However, digital technologies have revolutionized the evaluation landscape, offering educators more flexible and instantaneous feedback options. This shift makes assessments more widely available and more scalable, allowing teachers to evaluate many students quickly. Moreover, these digital tests can assess a wide range of abilities, from simple information retention to complex problem-solving, critical thinking, and creativity, making educators more adaptable and responsive to students' needs.

Here's an overview of the key digital assessment tools and techniques being used and explored in India for secondary education:

1. **Online Assessment Platforms**
   - **Tools**: Platforms like **Moodle**, **Google Forms**, **Microsoft Forms**, **Quizizz**, and **Edmodo** are widely used for digital assessments in secondary schools.
   - **Techniques**: These tools allow teachers to create quizzes, multiple-choice questions (MCQs), short answers, and essay-type assessments online. They offer instant feedback, automated grading, and can be easily customized to suit different subjects and difficulty levels.
   - **Benefits**: Teachers save time with automated grading, while students benefit from immediate feedback. These platforms also allow for tracking student progress over time.

2. **Adaptive Learning and Assessment**
   - **Tools**: AI-powered platforms like **BYJU**, **Toppr**, and **Khan Academy** use adaptive learning technology to adjust the difficulty of questions based on the student's performance.
   - **Techniques**: These platforms assess students' abilities in real time and adapt the learning material accordingly. The system provides more challenging questions as the student progresses or simplifies tasks if they struggle.
   - **Benefits**: This personalized approach ensures that students can handle their challenges, providing a more tailored learning and assessment experience.

3. **AI-Based Proctoring and Assessment**
   - **Tools**: **Mettl**, **TCS iON**, and other AI-based platforms offer online proctoring solutions to ensure the integrity of digital assessments.
   - **Techniques**: These platforms use AI to monitor students during assessments via webcam and microphone, checking for suspicious behaviour such as cheating or unauthorized help. Eye movement tracking, facial recognition, and keystroke analysis are some techniques used.
   - **Benefits**: This ensures fairness and security in online assessments, particularly for large-scale exams like board assessments and competitive exams.

4. **E-Portfolios**
   - **Tools**: Tools like **Seesaw**, **Google Sites**, and **Mahara** are used to build e-portfolios for students.
   - **Techniques**: E-portfolios allow students to showcase their work digitally, such as assignments, projects, presentations, and creative work, over some time. Teachers can assess the process and final output through regular feedback on these portfolios.
   - **Benefits**: E-portfolios encourage continuous learning and reflection while providing a comprehensive view of student progress beyond traditional exams.

5. **Gamified Assessment**
   - **Tools**: Platforms like **Kahoot!**, **Quizizz**, and **Nearpod** offer gamified assessments, turning quizzes and tests into engaging learning experiences.
   - **Techniques**: These tools use game-like features, such as points, leaderboards, and time-based challenges, to make assessments more interactive and enjoyable. Students can participate individually or in teams.
   - **Benefits**: Gamification increases student engagement and motivation while providing real-time feedback on their performance. It also reduces anxiety around assessments by making them more fun and informal.

6. **Interactive Simulations and Virtual Labs**
   - **Tools**: **PhET**, **OLabs**, and **Tinkercad** are some platforms that provide interactive simulations and virtual labs for subjects like science, mathematics, and technology.
   - **Techniques**: Virtual labs allow students to conduct experiments and simulations online, which teachers can assess based on their completion and understanding. These simulations can also be paired with quizzes or tasks to evaluate the learning outcome.
   - **Benefits**: Virtual labs enable students to engage in practical experiments without physical lab equipment, which is especially useful for schools with limited resources. It provides teachers with real-time data on student interactions within the simulations.

7. **Digital Badges and Certifications**
   - **Tools**: Platforms like **ClassDojo**, **Credly**, and **Badgecraft** allow educators to award digital badges for student achievements in specific skills or activities.
   - **Techniques**: Teachers can create badges for academic and non-academic achievements, like completing a project, excelling in a particular subject, or demonstrating leadership. These badges act as micro-credentials, recognizing students' specific abilities.
   - **Benefits**: This technique supports continuous assessment, encourages skill development, and motivates students by tangibly recognizing their efforts and achievements.

8. **Formative Assessments through Learning Management Systems (LMS)**
   - **Tools**: **Google Classroom**, **Microsoft Teams**, and **Schoology** are widely used as LMSs in Indian schools.
   - **Techniques**: These platforms enable teachers to create assignments, quizzes, and assessments that are used for **formative assessment**—which focuses on monitoring student learning progress during the course rather than at the end. Teachers can use short quizzes, polls, and peer-assessment tasks regularly.
   - **Benefits**: Formative assessments via LMS provide ongoing feedback, helping teachers identify learning gaps early and adjust their instruction accordingly.

9. **Project-Based Digital Assessment**
   - **Tools**: Platforms like **Padlet**, **Trello**, and **Flipgrid** are helpful for collaborative project-based assessments.
   - **Techniques**: Students are assigned collaborative projects, which they document and submit digitally. Teachers assess the final product and the process—how students plan, collaborate, and contribute to the project.
   - **Benefits**: These tools promote critical thinking, teamwork, and problem-solving skills. Teachers can also track student progress at each project stage, making the assessment more holistic.

10. **Video and Audio-Based Assessments**
    - **Tools**: Tools like **Flipgrid**, **YouTube**, and **Edpuzzle** enable video and audio-based assessments.
    - **Techniques**: Students can submit video or audio recordings of presentations, explanations, or performances, which teachers assess. These tools can also be used to create interactive video quizzes, where questions are embedded in the video content.
    - **Benefits**: This technique is particularly effective for assessing communication skills, language proficiency, and creativity. It also encourages active participation from students who might feel uncomfortable expressing themselves in written form.

11. **Analytics-Based Assessment**
    - **Tools**: Platforms like **EdTech** companies' dashboards (e.g., BYJU's, Khan Academy, etc.) use AI-based analytics to provide detailed reports on student performance.
    - **Techniques**: These platforms track students' learning behavior, such as time spent on each question, difficulty levels encountered, and patterns in incorrect answers. Teachers can use these insights to provide targeted feedback and customized learning interventions.
    - **Benefits**: Teachers receive detailed, data-driven insights into individual student performance, allowing for personalized learning plans and interventions.

12. **Blended Learning and Flipped Classroom Assessments**
- **Tools**: **Edpuzzle**, **Nearpod**, and **Socrative** support assessments in blended and flipped classroom models.
- **Techniques**: In a flipped classroom, students engage with learning material (videos, articles, etc.) at home, while class time is used for discussion and hands-on activities. Assessments in this model can include online quizzes based on pre-class learning, in-class discussions, and reflective assignments.
- **Benefits**: This technique ensures that students engage with the material outside the classroom, while digital tools help track participation and comprehension before class discussions.

Benefits:
1. **Immediate Feedback and Data-Driven Insights:** The rapid feedback feature of digital tests is one of their most significant benefits. This makes it possible for pupils to recognize their errors and potential growth areas as soon as they finish an assessment. Digital solutions for teachers provide comprehensive analytics that shed light on student development, learning gaps, and class performance. By utilizing real-time data, teachers can modify their pedagogical approaches and provide prompt interventions to assist students experiencing difficulties.
2. **Customization and Flexible Education:** Each student's specific demands can be catered for with individualized digital exams. Adaptive tests make sure that they are neither too easy nor too hard by changing the questions' level of difficulty in response to a student's performance in real-time. This kind of individualized assessment aids in determining a student's actual aptitude, improving the efficiency and focus of instruction. Students' nervousness is also decreased by it because it adapts to their skill level and pace.
3. **Increased Engagement and Motivation:** The evaluation process can be made more interesting by using digital tools like gamified exams, interactive tests, and multimedia-based assignments (such movies and animations). Students are more likely to actively participate in examinations when there are enjoyable and interactive elements included. Utilizing game mechanics like points, leaderboards, and badges, educational tools such as Kahoot! and Quizizz encourage students to perform better, hence enhancing the learning process and creating a competitive atmosphere.
4. **Scalability and Efficiency:** Because digital exams are scalable, educators may quickly and effectively evaluate a large number of pupils. Manual corrections take a lot more time and work than with automated grading methods. Teachers who have big class sizes would especially benefit from this because it will free up more time for them to concentrate on teaching tasks rather than grading. Additionally, because digital assessments allow for remote evaluation, it is simpler for educational institutions to offer tests in wholly online or hybrid learning contexts.
5. **Accessibility and Inclusivity:** With capabilities like text-to-speech, bigger fonts, and adjustable screen brightness that can accommodate students with disabilities, digital examinations promote accessibility. These resources guarantee that special needs pupils don't suffer during evaluations. Additionally, digital platforms can accommodate heterogeneous classes with kids from various linguistic origins by providing examinations in numerous languages.
6. **Comprehensive Skill Assessment:** Digital technologies can measure a greater range of skills than traditional examinations, which frequently concentrate on knowledge recall. Examples of tools that let students showcase their creativity, teamwork, problem-solving skills, and critical thinking are e-portfolios, simulations, and project-based evaluations. This change promotes more all-

encompassing learning experiences that go beyond rote memorizing to apply knowledge in real-world contexts.

7. **Longitudinal Tracking of Progress:** The ability to continuously track a student's progress over time is made possible by digital tools. Instructors are able to monitor trends in performance over time, including gains or losses in a variety of disciplines or abilities. With the aid of this historical data, educators can gain a thorough knowledge of a student's learning trajectory and spot trends that may not be apparent from more conventional exams.

8. **Eco-Friendly and Cost-Effective:** Because digital evaluations replace paper-based exams, they reduce paper consumption and promote environmental sustainability. Schools save money on distribution, printing, and storage of hard copy test materials. Additionally, managing and retrieving student records becomes more cost-effective and efficient when everything is kept online.

9. **Encourages Hybrid and Remote Learning:** Digital tests offer a workable way to evaluate students anywhere, even with the growing popularity of remote and hybrid learning environments. Exam integrity is guaranteed by remote proctoring systems, and online learning environments provide ongoing evaluation and participation, increasing flexibility and accessibility for distance learning students.

Challenges in Digital Assessment Adoption in India

Digital Divide: The successful implementation of digital exams may need to be improved by limited access to technology and internet connectivity, particularly in rural areas.

Teacher Training: To apply digital assessment tools and analyze the data produced by these platforms, teachers must receive the appropriate training.

Infrastructure: A significant hurdle in the adoption of digital assessment is the lack of access to the necessary technology in many schools. Computers, tablets, and fast internet, all essential for conducting digital assessments, are still out of reach for many.

Standardization: With the proliferation of digital technologies, it might be challenging to guarantee that digital examinations are administered consistently across educational institutions.

Conclusion: The introduction of digital technologies and approaches in school evaluations has brought about a significant change in the way student learning is assessed. These advancements offer a host of benefits, including personalized learning experiences, instant feedback, increased engagement, and real-time tracking of student progress. They also enhance the scalability and accessibility of examinations, particularly in remote and hybrid learning contexts. Digital evaluations provide many benefits, like increased inclusivity and efficiency, but there are drawbacks as well that should be carefully considered. The responsible and equitable use of these tools is of utmost importance. To guarantee this, concerns about data privacy, digital equity, and the ethical application of AI in automated grading must be addressed. Teachers also need to strike a balance between the ease of use of digital assessment tools and the requirement for comprehensive, relevant evaluations that cover a wide range of student competencies outside of standardized testing.

When used effectively, digital assessment tools and methodologies have the power to revolutionize education. They can increase the dynamic nature, adaptability, and student-centeredness of assessments. As technology continues to develop, schools and instructors must embrace these advances, while also focusing on promoting deep learning and meeting the diverse needs of their students. With careful integration and continuous improvement, digital evaluations have the potential to significantly

contribute to the development of future education systems that are more efficient, inclusive, and customized.

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CURRENT PRACTICES OF SWAYAM MOOCS IN INDIA

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Abstract

In the present era, the education system moving towards online courses. SWAYAM (Study of Web of Active learning for young Aspiring Minds) is an Indian online learning portal for MOOC (Massive Open Online Course) platform.SWAYAM initiative was launched by Ministry of Human Resource Development (MHRD) and is providing innovative courses through its online portal. This paper discusses the current practices of SWAYAM MOOCs in India. SWAYAM National Coordinators and their role have been discussed and the overall student's enrollment, courses completed and exam registration. The researcher also discusses the different types of MOOCs in India. The study identifies certain challenges and benefits of using SWAYAM MOOCs in Indian platform.

Keywords: SWAYAM, MOOCs, current practices

Introduction: Online learning uses technology for delivering the courses. Education with technology is considered as the most promising development in Higher education. With technology globalization, the concept of learning and teaching has undergone a tremendous change. The significant changes in the use of technology in online education in Higher Education in India have seen the emergence of the concept of Massive Open Online Course (MOOC). Nowadays, MOOC is the most popular way used to offer online courses in Higher Education, globally. MOOC is a massive course designed to support unlimited (logically) participation and is offered through a platform. Massive Open Online Courses (MOOCs) are free online courses available for anyone to enroll. MOOCs provide an affordable and flexible way to learn new skills, advance your career and deliver quality educational experiences at scale. Millions of people around the world use MOOCs to learn for a variety of reasons, including career development, changing careers, college preparations, supplemental learning, lifelong learning, cooperate eLearning and training and more. Typically, MOOCs are used for higher education, upskilling and career advancement. The term 'MOOC' was coined by Dave Cormier in 2008.India has two major public MOOC platforms – NPTEL and SWAYAM. The SWAYAM MOOC Platform was developed indigenously by the All India Council for Technical Education (AICTE) in 2016 to facilitate the hosting of online learning courses. These courses can be accessed by anyone from any place and at any time. The SWAYAM MOOC courses are free of cost for everyone. The MOOC platform of SWAYAM is among the world's largest platforms. Some famous worldwide MOOC platforms are – Coursera, edX, FutureLearn, etc. SWAYAM is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz, access, equity, and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. This is done through a platform that facilitates hosting of all the courses, taught in classrooms from Class 9 till post-graduation to be accessed by anyone, anywhere at any time. All the courses are interactive, prepared by the best teachers in the country and are available, free of cost to

any learner. More than 1,000 specially chosen faculty and teachers from across the country have participated in preparing these courses. The courses hosted on SWAYAM are in 4 quadrants – (1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts. Steps have been taken to enrich the learning experience by using audio-video and multi-media and state of the art pedagogy / technology. SWAYAM empowers individuals to upskill and reskill, enhancing their career prospects and contributing to India's knowledge economy. Reskilling and upskilling initiatives play a pivotal role in addressing skill gaps, ensuring employability, and fostering a culture of lifelong learning. Through collaborative efforts between academia, industry, and the government, the National Education Policy (NEP) 2020 endeavors to create a workforce that is well-prepared for the challenges of the modern world and can thrive in diverse sectors, driving innovation, entrepreneurship, and inclusive development. The exposure through these courses would equip students with not only theoretical knowledge but also the skills, practices and latest trends demanded by the job market. It would bridge the gap between academia and industry, making college graduates more job-ready and competitive.

In order to ensure that best quality content is produced and delivered, ten National Coordinators have been appointed. They are:

1. AICTE (All India Council for Technical Education) for self-paced and international courses
2. NPTEL (National Programme on Technology Enhanced Learning) for Engineering
3. UGC (University Grants Commission) for non technical post-graduation education
4. CEC (Consortium for Educational Communication) for under-graduate education
5. NCERT (National Council of Educational Research and Training) for school education
6. NIOS (National Institute of Open Schooling) for school education
7. IGNOU (Indira Gandhi National Open University) for out-of-school students
8. IIMB (Indian Institute of Management, Bangalore) for management studies
9. NITTTR (National Institute of Technical Teachers Training and Research) for Teacher Training programme
10. INI (Institutes of National Importance) for Non-Technical Courses

Courses delivered through SWAYAM are available free of cost to the learners, however learners wanting a SWAYAM certificate should register for the final proctored exams that come at a fee and attend in-person at designated centres on specified dates. Eligibility for the certificate will be announced on the course page and learners will get certificates only if these criteria are matched. Universities/colleges approving credit transfer for these courses can use the marks/certificate obtained in these courses for the same. As per the SWAYAM website the ongoing courses are 1310+, ongoing enrollments are 39.1 lakh + and exam registration are 8.9 lakh+

➢ **Analysis of participation overall for SWAYAM (9 National Coordinators)**

SWAYAM (9 National Coordinators)	Partnering Institutes	Completed Courses	Student Enrollment	Exam Registrations	Successful Certification
	203	11845	42077301	4922758	3111042

Sources: https://swayam.gov.in/nc_details/

Types of MOOCs: There are different kinds of MOOCs that exist. Some MOOCs focus on teaching the basics of programming and are popular among learners with diverse backgrounds and interests.

Other MOOCs are designed for professional development or general interest, each with its own educational purpose

1) **xMOOC** - The most common type of MOOC, organized around a central professor and core curriculum of predefined learning materials.

2) **cMOOC** - "Connectivity" MOOCs are similar to graduate seminar courses in that the majority of the learning occurs through student-to-student interactions, with the course materials serving as a jumping off point for discussions.

3) **DOCC** - The term "DOCC" refers to Distributed Online Collaborative Courses or courses where students at different schools receive the same course materials, albeit there may be variations in how the materials are administered. Through the online component, students can interact with one another from different colleges as well.

4) **BOOC** - Big Open Online Courses, or BOOCs, are comparable to MOOCs but are usually only available to 50 students.

5) **SMOC** – Synchronous Massive Online Courses, or SMOCs, are not the same as xMOOCs in that students must log in at designated times to hear the lectures, which are streamed live.

6) **SPOC** - Small Private Online Courses are similar to BOOCs, in that the class sizes are limited, but the student's teacher interactions are more closely modeled after traditional classroom interactions. SPOCs are similarly referenced in the "flipped classroom" model.

7) **Corporate MOOCs** - MOOC courses designed for employee training or continuing education typically subsidized or uniquely accredited by employers.

SWAYAM Board (As per SWAYAM Guidelines 2024)

Project approval board of NMEICT will be responsible for managing the SWAYAM and SWAYAM Prabha platforms by ensuring effective coordination between various technical and academic bodies for smooth delivery of high-quality online education.

Composition of the Board:

- Secretary (Higher Education) - Chairperson.
- Chairperson UGC.
- Chairperson AICTE
- (5) Bureau heads from the Ministry of Education (ex-officio) looking after: Technical Education, Management Education, Higher Education, School Education, Open/Distance Education.
- All National Coordinators of SWAYAM and SWAYAM PRABHA.
- JS&FA of MoE.
- Mission Director NMEICT (Member Secretary)

Functions of the Board:

- Take decisions for smooth running of SWAYAM and SWAYAM PRABHA platforms.
- Lay down policy regarding implementation aspects including, cost payable for course development and delivery, examination fees, introducing content from foreign/private institutions/universities, within parameters laid down by the competent authority.
- Review the progress of each Virtual Coordinator pertaining to sanction, progress, development, and delivery of various online courses. .

- Any other matter that arises during the operation and delivery of SWAYAM and SWAYAM Prabha.

SWAYAM Board Secretariat:

Swayam Board secretariat shall be located in MoE and will be responsible for overall management of SWAYAM related activities. The composition of the SB secretariat will be decided by the SWAYAM Board.

- ➤ Composition:
- Head of Secretariat -Mission Director
- Director (Tel) - Nodal officer
- PMU

Virtual Coordinators: Virtual coordinators are responsible for facilitating the development of e-content, course delivery and overseeing assessment procedures of courses offered on SWAYAM for their respective sectors. However, the Ministry may add Virtual Coordinators in future depending on course expansion requirements.

SWAYAM courses are divided into various modules. Each module covers a section of the syllabus. A module consists of about 25-30 minutes of video, broken into three to four smaller length videos. Continuous video lecture of longer duration may be avoided, as it is difficult for a student to keep concentrated for more than 10-15 minutes in one stretch. To make the lecture more engaging, some activities/quizzes etc. may be included with a pause during video play. Duration of SWAYAM course is usually 8 to 12 weeks. Total video hours in a course, including all modules, should not exceed 20 to 25 hours of videos. Depending on the subject and teacher's style of teaching, these modules are distributed over weeks, covering the entire course. Each week will begin with a brief introductory video of around Two minutes in duration introducing contents of that specific week. Module videos and assessments of the week will be released on scheduled days. Each week would conclude with a brief sum-up video of around 3 minutes reviewing concepts that are covered in that specific week.

Certificate

The SWAYAM Course Enrolment and learning is free. However, to obtain a certificate, the learner must register and take the proctored exam in person at one of the designated exam centres. The registration URL will be announced by NTA once the registration form becomes available. To receive the certification, you need to complete the online registration form and pay the examination fee. Additional details, including any updates, will be provided upon the publication of the exam registration form.

Grading Policy:

- Internal Assignment Score: This accounts for 30% of the final grade and is calculated based on the average of the best three assignments out of all the assignments given in the course.
- Final Proctored Exam Score: This makes up 70% of the final grade and is derived from the proctored exam score out of 100.
- Final Score: The final score is the sum of the average assignment score and the exam score.

Eligibility for Certification: To qualify for a certificate, one must achieve an average assignment score of at least 10 out of 30, and an exam score of at least 30 out of 70.

Certificate Details: The certificate will include your name, photograph, roll number, and the percentage score from the final exam. It will also feature the logos of the Ministry of Education, SWAYAM, and NITTTR.

- Certificate Format: Only electronic certificates (e-certificates) will be issued; hard copies will not be dispatched.

Challenges faced in offering MOOC

- The scheduler of SWAYAM LMS for scheduling e-content, assignment, MCQ's etc. of the course is non-functional and therefore e-content became available before due time.
- After the user run the video tutorial that was uploaded on the YouTube Channel as per guideline provided by SWAYAM, all irrelevant video gets browsed on the site. On an educational website, this is beyond netiquette.
- There are absolutely no interactive tools including dedicated discussion forum available within the course-ware for reflecting on problems that can be scheduled soon after module/unit/lesson for encouraging the learner to interact on different issues of the topic. Discussion Forum is available outside the course where all other general discussions on 'issues of learner' takes place. Therefore, the actual use of discussion forum actually created for resolving queries by the instructor gets lost among other threads.
- All the e-tutors do not have the same privilege to launch uploaded e-content in the library. The e-contents, tests, and assignments are not accessible to co-tutors & are available only to the e-tutor who has uploaded.
- The communication tools such as 'Announcement' and 'Discussion Board' are not accessible to e-tutors to communicate any important message(s) to learners after the due completion date of the course schedule.
- The weekly 'Tests' and 'Assignments' of LMS do not have the option to extend the due date.
- Access to any of the e-content on SWAYAM course requires Adobe plugin. It cannot be accessed by an internet browser alone. The lack of compatibility of adobe plugin on all the mobile devices creates difficulty in getting access to the e-content by mobile users.
- Website and app both are not Mobile users friendly.

Benefits of MOOCs to Participants

- MOOCs are free
- Allow access to education and expertise that you otherwise might not have access to.
- Opportunity to connect, collaborate and learn with peers and colleagues internationally.
- Create connections and networks that you can maintain once the course ends.
- Learn digital skills.
- Contribution to your lifelong learning (continuing education and professional development).

Conclusion: The introduction of SWAYAM as MOOCs courses has brought a great revolution in the educational scenario of India. The establishment of SWAYAM enhances employability of both college students and lifelong learners. It enables working professionals to balance their work and studies by offering a plethora of online courses and empowering individuals to upskill and reskill, enhancing their career prospects and contributing to India's knowledge economy.

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CHALLENGES AND OPPORTUNITIES IN DIGITAL EDUCATION

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Abstract

The significance of digital education in delivering high-quality education to all has been recognized by National Education Policy 2020. The process of supporting learning and the acquisition of information, skills, attitudes, beliefs, habits, etc. in order to support the socio-economic development of a country is known as education. Utilizing digital technologies and tools in the teaching and learning process, digital education is a multifaceted and complicated subject. There are a lot of opportunities in digital education for both teachers and students. Through social media, online forums, video chat, email, messaging, and other methods, educators and students are readily and actively connected with one another. Digital education offers enhanced accessibility, modification, and adaptability in terms of course content for students. It improves mobility, interactivity, engagement, and motivation in the learning process. Additionally, it permits educational programs that are available continuously in several languages to fulfill students' various demands. While there are plenty of advantages to digital education, India will face multiple challenges in the future. The development of effective online content, its digital repository, and the method of delivery to learning students through the effective infrastructure and technology are the main problems in the new era of digital education. The digital education system will be updated with further technological innovation and research. As a result, digital education will continue to effectively assist classroom instruction both now and in the future.

Key words: Digital education, advantages, opportunities, challenges

Introduction: In order to provide high-quality education for all students, National Education Policy 2020 emphasizes both the benefits and possible drawbacks of digital education. This policy suggests that organizations like NETF, CIET, NIOS, IGNOU, IITs, NITs, and others do pilot studies to assess the advantages of combining traditional classroom instruction with online learning. The study primarily examined issues such as student device addiction, preferred e-content forms, creating syllabus content for online learning, etc. Additionally, this policy sets up the adoption of these findings for ongoing advancements in digital education (National Education Policy, 2020).

Digital Education: The process of supporting learning, the acquisition of information, skills, attitudes, beliefs, habits, etc., is called education. Research revealed that, among other socioeconomic variables, education levels positively influence economic growth, productivity, income, innovation, and health (Jorgenson & Fumeni, 1993; Feinstein et al., 2006; Hanushek & Woessmann, 2010). According to T. Lynn et al. (2022), education is essential to the development of societies and national economies in the future. Education involves more than just using textbooks and classroom instruction; it also involves integrating new tools, technologies, creative ideas, and electronic information into the teaching and learning process. Wagner (2018) examined how the evolution of information and communication technologies (ICTs) has changed the character of the teaching and learning process. Digital education was formerly seen in India as a complement to traditional classroom instruction (Shah and Jani, 2020). The delivery of education is one of the many complex and complex components of digital education, in addition to the three pillars of education. The use of digital tools and technology in the teaching and learning process is known as digital education. Any type of education that includes the use of technology in conventional classrooms is referred to as "digital education." Both fully online education and blended learning, which combines face-to-face and virtual instruction, are offered at Allan (2019).

Terminologies like Technology Enhanced Learning (TEL), digital learning, and e-learning are all included in the definition of digital education. The use of advanced digital technology for teaching and learning within a community has been guaranteed by digital education. For these digital technologies to provide this kind of education, the right infrastructure is needed. Although the idea of digital learning is not new, its importance was greatly enhanced following the COVID-19 pandemic. The majority of educational establishments are adopting digital learning as an alternative to the conventional chalk-and-talk method of instruction. Learning is now more dynamic, interesting, inspiring, and easily accessible thanks to modern technology and fast internet. In the near future, government initiatives aimed at facilitating the effective implementation and adoption of digital education by educational institutions will place it at the center of the learning process.

Advantages of Digital Education: Teachers have a lot of options to engage their students through digital education. Through the convenience of time and location, learners and educators actively engage with one another through email, messaging, video chat, online forums, social media, and learning resources, among other means. According to Rosemarie M. (2022), learners can benefit from increased accessibility, personalization, and flexibility in their educational resources through digital education.

a) Accessibility: Access to instructional materials at a time and location that is convenient for both teachers and students is made possible by digital education. This can encourage lifelong learning and aid in expanding educational opportunities. For students who stay away from educational institutions, work, or have other obligations, online and blended learning can make their education more accessible.

b) Personalization: Digital learning resources can be customized by changing the technology used to access them as well as how they are configured. This facilitates the learner's ability to access and utilize the resources as needed and convenient.

c) Flexibility: The affordances of digital technology include the provision of learning materials in many formats, modes, or languages, enabling learners to engage in synchronous and asynchronous interactions with one another worldwide.

 According to JISC (2019), in order for students to live, learn, and work in a digital society, they must acquire the digital skills that employers want today in addition to the self-assurance and skills that will allow them to advance in their jobs and adjust to emerging technology.

Opportunities of digital education system

1. The learning process is more dynamic, inspiring, mobile, and interactive with digital education. By using a digital format, teachers can solve the issue of students lacking interest in traditional education methods by modifying the study materials to each student's unique learning style and speed.
2. Students get effective self-directed learning skills and are introduced to new learning resources and technology, which greatly increases their productivity, efficiency, and capacity for learning.
3. The traditional classroom setting was transformed into an interactive digital environment by digital technologies. Students who are familiar with the digital world may be more aware as an outcome.
4. In the past, students would rely on a small number of sources for information, but today's students have access to a tremendous amount of freely accessible material thanks to the internet. Thus, students can now study and utilize this wealth of knowledge thanks to the advent of digital education.

5. With just a click, it makes information sharing and preservation easier than with handwritten notes, proofreading notes, brief hand notes, etc. Students' time and physical effort can be saved as an effect

6. By pushing through students' enclosures and empowering them to think independently about what to study, when to study, and how to study, the digital education system reduces students' reliance on their parents and teachers.

7. Enables instructional programs to be made available around-the-clock in multiple languages to meet students' diverse needs.

8. Students can easily enable digital learning by using the internet on their laptops, desktop computers, tablets, and mobile phones.

9. In situations like pandemics and epidemics, where the usual school system is suspended, it has been demonstrated to be an appropriate educational system.

Digital infrastructure: The Indian education sector urgently needs to invest in building an open, compatible with one another, evolvable public digital infrastructure, taking into account the country's limitations with respect to scale, diversity, complexity, equity, and device access, among other issues. In order to be relevant, these technologically based solutions must likewise evolve in parallel with technological advancements.

Online content creation, digital repository and mode of delivery: The 2020 National Education Policy provides precise guidelines for the construction of digital repositories, or online content. Students should have equal access to high-quality online information that engages them in enjoyable learning experiences. NEP 2020 also suggests creating online learning environments or virtual labs similar to DIKSHA, SWAYAM, and SWAYAMPRABHA. It encourages mixed learning paradigms. whereby 60% of the course material will be covered offline and 40% will be covered online. The philosophy, technology, and rules governing online content for digital and online teaching and learning will be implemented gradually. Higher education institutions must therefore change such that up to 40% of each course can be taught online and the remaining 60% can be taught offline. This blended approach to education also upholds the significance of in-person, face-to-face instruction.

Challenges for Online Education in India

In light of time limitations, NEP 2020 encourages digital learning in India. However, there are numerous difficulties with online instruction. The main difficulties are as fallows

- One of the most important requirements for digital education is the availability of high-speed internet connectivity, compatible devices, software, and apps at reasonable prices. The government needs to act up and offer financial assistance as well as regulations that would stimulate the Indian market for the facilities needed for digital education.

- Online education must be combined with experiential and activity-based learning to avoid becoming screen-based and losing attention on students' overall development as well as their social, emotional, and physical requirements.

- There are limitations to some course/subject combinations in digital education, such science practical tasks and performing arts, which will require creative solutions in the future.

- For teachers to be successful online educators, they will need to grow professionally and receive the right training. Another significant issue is teachers' familiarity with the new online learning platforms, tools, and teaching formats.

- The majority of students in India come from working-class backgrounds such as farmers, housemaids, sweepers, cleaners, and waiters, and their financial circumstances might not allow them to meet all the prerequisites for online learning. Only 4.4% of rural households and 23.4% of urban households, respectively, own personal computers, according to the NSSO survey.

- It can be difficult to assess and evaluate students in online courses, particularly programs that are practical or technical in nature.

- According to a survey, there are a number of difficulties that teachers and students encounter when learning online, including difficulty adjusting to the online environment, learners' lack of focus and concentration, learners' distraction from one social media platform to another, health problems from prolonged screen time, etc. As a result, Almahaseeset al., 2021 proposed that strong self-discipline and focus might be developed in order to facilitate successful learning through digital mode.

Conclusion: The significance of digital education in delivering high-quality education to all was acknowledged by National Education Policy 2020. In India, this policy encourages digital education. The employment of digital tools and technology in the classroom is known as digital education. Both educators and their students can benefit greatly from digital education. Digital education offers learners a wide selection of high-quality learning resources at their convenience and convenience. It is also more flexible, impressive, and time-retentive. Even while there are many advantages to digital education, there are also many obstacles in India. In the new era of digital education, some of the main obstacles that must be overcome are the creation of effective online material, their digital repository, and the mode of delivery to learners through the creation of effective infrastructure and technology. The digital education system will be updated with further technological innovation and research.

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DIGITAL LITERACY AND CRITICAL THINKING: ENHANCING STUDENT LEARNING

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Abstract

In the 21st century, digital literacy has emerged as a fundamental skill for students, extending far beyond traditional academic boundaries. As technology increasingly permeates all facets of life, the ability to effectively navigate, understand, and utilize digital platforms has become essential for communication, collaboration, and active participation in today's global economy. This paper explores the interconnectedness of digital literacy and critical thinking, highlighting their combined impact on student learning. Digital literacy equips students with the technical and cognitive skills required to assess, interpret, and engage with digital content, while critical thinking enables them to evaluate the credibility and relevance of the information they encounter. Together, these competencies foster improved problem-solving, creativity, and decision-making skills. The paper also addresses the challenges, such as the digital divide and information overload that hinder the development of these skills. Additionally, it offers strategies for integrating digital literacy and critical thinking into educational curricula, ultimately preparing students to thrive in a dynamic, technology-driven world. By fostering these essential skills, educators can equip students to become informed, responsible digital citizens, capable of navigating and contributing thoughtfully to the ever-changing digital landscape.

Introduction: In the 21st century, digital literacy has become a crucial skill for students, extending far beyond the traditional confines of academic achievement. As the world becomes more interconnected through technology, the ability to navigate, understand, and utilize digital platforms is now essential for effective communication, collaboration, and participation in the globalized economy. Digital literacy refers to a broad set of competencies that enable individuals to access, interpret, and engage with digital content. It involves not only the technical skills required to operate digital devices and software but also the cognitive abilities necessary to critically evaluate and generate meaningful content. This skillset has become foundational for success in both educational settings and the broader professional landscape. Digital literacy empowers students to engage with the vast amount of information available online, fostering skills such as identifying reliable sources, understanding various media formats, and discerning the intent behind digital communications. In the academic context, these skills are indispensable for research, content creation, and collaborative learning. As students become more proficient in digital literacy, they develop the ability to use technology as a tool for problem-solving, creativity, and innovation. When digital literacy is paired with critical thinking, the impact on student learning is even more profound. Critical thinking enables students to question assumptions, evaluate evidence, and approach problems from multiple perspectives. Together, these two competencies allow students to not only access information but also to assess its credibility, relevance, and value. In a digital world where misinformation, biased content, and unreliable sources are prevalent, the ability to critically engage with digital media is essential for making informed decisions. Students learn to distinguish between factual content and opinion, navigate through conflicting viewpoints, and synthesize information from various sources to form coherent, well-supported arguments. Interconnectedness of digital literacy and critical thinking, emphasizing how their integration enriches the learning experience. By combining these two skill sets, educators can foster deeper engagement with course material, promoting not just the acquisition of knowledge but the ability to apply that knowledge in meaningful, real-world contexts. The paper explores practical approaches for embedding

both digital literacy and critical thinking into the curriculum, examining their role in shaping well-rounded, adaptable learners capable of thriving in the dynamic, ever-changing digital landscape.

Keywords

- Digital literacy
- Critical thinking
- Student learning
- Information evaluation
- Technology integration

Concept of Digital Literacy: Digital literacy refers to the skills required to effectively navigate the digital environment, including the ability to understand and use technology, access information, and communicate through digital means. According to UNESCO, digital literacy is a crucial element of digital competence, which involves the confident and critical use of information and communication technologies (ICT) for work, leisure, and learning. Students with strong digital literacy skills can critically assess the quality of online information, interact with multimedia content, collaborate with peers, and create original works in various digital formats. As the educational landscape evolves, the development of digital literacy in students is becoming increasingly essential for academic success.

Concept of Critical Thinking: Critical thinking involves the active process of conceptualizing, analyzing, synthesizing, and evaluating information to form reasoned judgments. In the educational context, critical thinking is vital for problem-solving, decision-making, and the application of knowledge in real-world scenarios.

The combination of digital literacy and critical thinking allows students to not only consume information passively but also engage with it critically. They learn to question the accuracy, bias, and relevance of the content they encounter, enabling them to form well-supported opinions and conclusions.

The Intersection of Digital Literacy and Critical Thinking

1. **Information Evaluation: -** Digital literacy empowers students to access vast amounts of information. However, critical thinking is essential in assessing the reliability and credibility of this information. In an era where misinformation and "fake news" are prevalent, students must learn to question the sources of the content they encounter. This involves checking the author's credentials, cross-referencing information, and distinguishing between fact and opinion.

2. **Problem-Solving and Decision-Making:-** Digital literacy, coupled with critical thinking, equips students with problem-solving skills. For instance, when faced with complex assignments, students must navigate digital platforms to gather data, analyze different perspectives, and make informed decisions based on evidence. This process cultivates independent learning and enhances students' ability to approach problems systematically.

3. **Creativity and Innovation: -** Digital tools provide students with platforms for creativity and self-expression. Critical thinking encourages them to think innovatively while using these tools. Whether creating multimedia projects, developing presentations, or producing digital content, students utilize both digital literacy and critical thinking to deliver meaningful and original work.

Enhancing Student Learning Through Digital Literacy and Critical Thinking

1. **Improved Research Skills: -** When digital literacy and critical thinking are integrated into the curriculum, students become more adept at conducting thorough and well-structured research. They learn to distinguish between primary and secondary sources, evaluate the relevance of information, and synthesize data from multiple perspectives.

2. **Enhanced Collaboration and Communication: -** In the digital age, students often work collaboratively through online platforms, where communication skills are vital. Digital literacy enables students to navigate these platforms, while critical thinking ensures that their contributions are thoughtful and meaningful. Collaborative projects foster the exchange of diverse ideas and encourage students to critically assess the contributions of their peers.

3. **Informed Digital Citizenship: -** A critical aspect of digital literacy is the cultivation of responsible digital citizens. Critical thinking enhances students' understanding of ethical issues related to technology use, such as privacy, cyberbullying, and intellectual property. By applying critical thinking, students become more aware of the impact of their online behavior and are equipped to make ethical decisions in digital spaces.

Challenges in Promoting Digital Literacy and Critical Thinking

1. **Digital Divide: -** Not all students have equal access to digital technologies, leading to disparities in digital literacy skills. Students from underserved communities may face challenges in acquiring these skills, thus limiting their ability to fully engage with the digital world and critical thinking processes.

2. **Overload of Information: -** The vast amount of information available online can overwhelm students, making it difficult for them to filter relevant content. Without critical thinking skills, students may struggle to discern between reliable sources and misinformation.

3. **Teacher Training: -** Educators play a crucial role in fostering digital literacy and critical thinking in students. However, many teachers may lack adequate training in integrating digital tools into their teaching practices. This can hinder the development of these skills in students, particularly in traditional educational environments.

Strategies for Integrating Digital Literacy and Critical Thinking in Education

1. **Curriculum Design**: - Schools should integrate digital literacy and critical thinking skills into the curriculum across subjects. This can include teaching students how to research effectively, evaluate information critically, and use digital tools for problem-solving. Projects and assignments should encourage students to question and analyze information from various sources.

2. **Professional Development for Teachers**: - Educators should receive ongoing training in digital literacy tools and critical thinking strategies. Workshops, online courses, and collaborative teaching communities can equip teachers with the skills to model and teach these competencies to their students.

3. **Promoting a Culture of Inquiry: -** Encouraging students to ask questions, challenge assumptions, and think critically about digital content should be a core part of the learning environment. Teachers can foster a culture of inquiry by engaging students in discussions, debates, and reflective practices around the use of digital media.

Conclusion: The integration of digital literacy and critical thinking into modern education is not just a pedagogical enhancement but a necessity for preparing students to thrive in an increasingly

interconnected and fast-evolving world. By equipping students with the ability to critically assess digital content, educators empower them to become informed and responsible digital citizens. This not only helps them succeed in their academic pursuits but also enables them to contribute thoughtfully to society. Addressing challenges such as the digital divide and the overwhelming flow of information requires a concerted effort from both educators and policymakers. Bridging these gaps ensures equitable access to technology and knowledge, allowing all students to develop the necessary competencies. A curriculum that intentionally fosters these skills—through project-based learning, interactive technology, and real-world problem-solving—cultivates a generation of learners who are adaptable, innovative, and capable of critical reflection.

Ultimately, the fusion of digital literacy and critical thinking shapes a more informed, engaged, and adaptable student body, ready to confront the challenges of the future with confidence and a nuanced understanding of the digital landscape. By continuing to prioritize these skills, we lay the foundation for students not only to succeed academically but also to thrive as lifelong learners and informed participants in a global society.

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DIGITAL ASSESSMENT TOOLS FOR PEER AND SELF-ASSESSMENT

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Abstract

In the evolving educational landscape, peer and self-assessment have become essential components of student-centered learning. These assessment methods foster deeper engagement, critical thinking, and self-reflection by encouraging students to take active roles in evaluating both their own work and that of their peers. The integration of digital tools such as Peergrade, Google Classroom, Flipgrid, and Moodle has revolutionized peer and self-assessment, making them more scalable, interactive, and efficient. These platforms provide instant, formative feedback, empowering students to reflect on their learning, set personalized goals, and gain diverse perspectives through peer review. Moreover, the use of these digital tools supports collaborative learning, enhancing communication and engagement among students. Despite the numerous benefits, challenges such as technological barriers, bias in assessments, and data privacy concerns persist. This paper explores the advantages of digital tools in peer and self-assessment, including increased student accountability, improved learning outcomes, and the promotion of reflective practice. Additionally, it addresses the need for training educators and students to effectively use these tools while maintaining the validity and reliability of assessments. Ultimately, the integration of digital assessment tools enhances student learning by fostering a collaborative and reflective learning environment that is key to modern education.

Introduction: The educational landscape has shifted significantly, moving from traditional, teacher-led assessments to include peer and self-assessment methods that emphasize collaborative and reflective learning. In this evolving framework, students are not passive recipients of knowledge; rather, they take an active role in assessing their own learning and that of their peers. Peer and self-assessment have proven to be valuable strategies in promoting deeper learning, self-awareness, and critical thinking, as they encourage students to analyze and reflect on both their work and that of others. By actively engaging in the evaluation process, students develop essential skills such as critical thinking, self-regulation, and the ability to give and receive constructive feedback. Digital technology has been a game changer in making these assessment methods more effective, scalable, and interactive. Digital tools such as Peergrade, Google Classroom, Flipgrid, and Moodle have enabled educators to seamlessly integrate peer and self-assessment into their teaching practices. These platforms provide students with instant feedback, which is crucial for their continuous development and understanding of the subject matter. The scalability of digital tools allows these assessments to be efficiently conducted even in large or remote classes, making peer and self-assessment more feasible in various educational settings. These digital tools empower students by giving them more control over their learning processes. Through self-assessment, students are encouraged to reflect on their progress and set personalized learning goals. Peer assessments help them see different perspectives and gain new insights into their work, leading to more meaningful learning experiences. Ultimately, the integration of digital technology has enhanced the overall efficacy of peer and self-assessment, making them key components in modern education.

Key Words: Peer Assessment, Self-Assessment, Digital Tools, Collaborative Learning, Formative Feedback, Reflective Practice, Educational Technology, Student Engagement, Critical Thinking, Digital Learning Platforms.

Meaning and Definition of Peer and Self-Assessment in Education:

- **Peer Assessment**: Students review their classmates' work using established criteria. This process encourages active learning and critical evaluation.
- **Self-Assessment**: Learners assess their own work, reflecting on their strengths and weaknesses to enhance self-awareness and identify areas for growth.

Digital Tools for Peer and Self-Assessment:

Peergrade: Peergrade is a powerful digital platform specifically designed for conducting anonymous peer evaluations. Teachers create assignments and define clear rubrics, which guide students in evaluating their classmates' work. By anonymizing the feedback process, Peer grade fosters a sense of fairness and objectivity, minimizing the potential for bias that can arise from personal relationships or favouritism. This anonymity encourages students to provide honest, constructive feedback without fear of offending their peers. Additionally, Peer grade helps students develop critical thinking and evaluative skills, as they must apply the teacher-defined criteria to assess their peers' work. The platform also allows teachers to oversee the process, ensuring the quality of feedback and identifying any areas where students may need further guidance.

Google Classroom: Google Classroom is a widely used educational platform that integrates peer and self-assessment features seamlessly within its assignment tools. Teachers can create assignments and set up peer review processes where students evaluate each other's work based on predefined rubrics. Google Classroom's simplicity and ease of use make it a popular choice for managing assessments, particularly in blended and online learning environments. Through this platform, teachers can track student progress, monitor the feedback exchanged between peers, and intervene when necessary to ensure the feedback is constructive. Moreover, the platform supports self-assessment, allowing students to reflect on their own performance and make improvements based on teacher or peer feedback. The real-time nature of the platform ensures that feedback is timely, promoting continuous learning.

Flipgrid: Flipgrid is a video-based platform that enables students to record and share video reflections, discussions, and feedback with their peers. This dynamic tool fosters a more engaging and interactive form of peer assessment, as students can use video to communicate their thoughts and reflections in a way that feels more personal and expressive compared to written feedback. By incorporating video responses, Flipgrid encourages students to develop oral communication skills and express their ideas in a clear, thoughtful manner. The platform is particularly effective for fostering discussions, as students can respond to each other's videos, creating a dialogue that deepens understanding and promotes collaborative learning. Flipgrid's user-friendly interface and multimedia capabilities make it a versatile tool for enhancing peer interactions.

Edmodo: Edmodo is a learning management system (LMS) that supports peer collaboration and feedback through interactive exchanges. It encourages students to share their work with their peers and engage in discussions to provide feedback and suggestions for improvement. The platform creates a collaborative learning environment where students can support one another in their academic journey. Edmodo's interface allows teachers to set up peer assessment tasks easily and monitor the interactions between students to ensure the quality of feedback. By promoting communication and collaboration, Edmodo helps students improve their understanding of course content, as they are exposed to different

viewpoints and approaches from their peers. The platform also facilitates teacher involvement, allowing for a more guided peer review process.

Moodle: Moodle's "Workshop" module is a robust tool designed for structured peer and instructor feedback. In this module, students submit their work, which is then distributed to peers for assessment based on criteria provided by the teacher. The peer review process in Moodle is structured and organized, ensuring that students provide feedback that is aligned with the learning objectives and assessment rubrics. Teachers can also participate in the feedback process, offering additional insights and guidance to help students improve. Moodle's detailed tracking and reporting features allow teachers to monitor the feedback exchange, assess the quality of peer reviews, and provide targeted support where needed. The "Workshop" module is highly customizable, making it an effective tool for a wide range of assessment tasks, from simple peer reviews to complex projects requiring multi-stage evaluations.

Benefits of Digital Tools for Peer and Self-Assessment:

- **Increased Engagement**: Digital platforms make assessments more interactive and engaging by incorporating multimedia and real-time updates. Gamification and user-friendly interfaces further enhance students' active participation.

- **Enhanced Feedback**: Instant feedback from peers allows students to gain diverse perspectives, enriching their understanding of course content. Tools for self-assessment prompt students to reflect on their progress and set personal goals.

- **Development of Critical Thinking**: Both peer and self-assessment require students to think critically as they analyze their work and that of their peers. Evaluating based on rubrics fosters deeper learning and analytical skills.

- **Scalability**: Digital tools streamline the peer assessment process, making it easier to implement even in large classes. Automation features such as rubric-based evaluations and feedback collection make the process efficient.

- **Personalized Learning**: Self-assessment allows students to tailor their learning by identifying areas where they need improvement. Peer feedback offers diverse insights, helping students see their work from multiple perspectives.

- **Improved Learning Outcomes**: Engaging in regular peer and self-assessments leads to greater student achievement. Feedback encourages continuous reflection and revision, which helps students internalize learning objectives.

- **Accountability**: Knowing that their peers will assess their work motivates students to produce higher-quality outputs. Self-assessment also promotes a sense of responsibility for one's own learning progress.

- **Collaboration and Communication**: Peer assessment encourages students to provide constructive feedback and articulate their ideas clearly. These interactions develop their communication skills and foster collaboration.

- **Flexibility and Accessibility**: Digital tools allow students to complete assessments at their own pace and from any location. This flexibility is especially beneficial in remote or blended learning environments, and accessibility features ensure inclusiveness for students with varying needs.

Challenges in Using Digital Tools for Peer and Self-Assessment:

- **Technological Barriers**: Some students lack access to the necessary technology, such as devices or reliable internet connections. This can hinder their participation in digital assessments, especially in under-resourced areas.
- **Bias and Subjectivity**: Peer assessments can sometimes be influenced by personal relationships, leading to biased evaluations. Anonymity, which many digital tools offer, can reduce bias, but completely eliminating it remains challenging.
- **Data Privacy and Security**: Digital platforms store sensitive information, raising concerns about data protection. Schools must ensure compliance with data privacy laws and secure the platforms used for assessments.
- **Training and Familiarity**: Educators and students must be adequately trained in using digital tools for peer and self-assessment. Without proper training, students may misunderstand how to evaluate work, and teachers may struggle to monitor the process effectively.
- **Over-Reliance on Technology**: Digital tools should not replace the reflective, interpersonal aspects of peer and self-assessment. Automated processes can lead to superficial engagement if students do not see the value in giving thoughtful feedback.
- **Assessment Validity and Reliability**: The accuracy of peer and self-assessments depends on well-designed rubrics and students' understanding of the criteria. Inconsistencies in feedback can lead to unreliable results, reducing the validity of assessments.
- **Teacher's Role in Monitoring**: Teachers must carefully monitor peer assessments to ensure the feedback is constructive and fair. In large classes, managing numerous assessments can become overwhelming without adequate oversight.
- **Resistance to Change**: Both educators and students may resist adopting digital assessment tools due to a preference for traditional methods. Overcoming this resistance requires clear communication about the benefits of digital assessments and ongoing support to ease the transition.

Summary: Digital tools have significantly enhanced the peer and self-assessment process by making it more interactive, scalable, and flexible. These tools promote student engagement, critical thinking, and collaboration, while offering personalized learning opportunities. However, challenges such as technological barriers, bias, and the need for adequate training must be addressed for successful implementation. As education continues to embrace digital transformation, peer and self-assessment will likely play an even greater role in fostering reflective, collaborative learning environments.

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ENHANCE AND SUSTAIN LEARNING THROUGH BLENDED APPROACH

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Abstract

This study investigates the effectiveness of a blended learning approach in Enhancing and sustaining student engagement and academic performance. By integrating online resources, interactive Multimedia and face to face instruction examines that how this hybrid mode can cater to divers learning styles and promote active participation. Data were collected through surveys and focus groups involving students and educators across multiple disciplines. Findings reveal that students experienced increased motivation and improved learning outcomes, with 80% reporting a preference for the blended learning mode over traditional methods. The results suggest that blended learning not only enhances immediate understanding but also fosters a deeper, more sustained engagement with course material. This study underscores the potential of blended learning as a viable strategy for modern educational settings, providing insights for educators seeking to create more dynamic and effective learning environments. So that in this paper we are going to see that how it benefits for the students learning, professional development and outcomes of blended learning.

Key words: Blended learning, Hybrid mode, Sustain, Educator, Academic performance

Enhancing and Sustaining Learning Through a Blended Approach , In the ever evolving land scape of education , a blended learning approach has emerged as a powerful method for enhancing and sustaining students engagement and achievement .this model combines traditional face-to-face instruction with online learning , allowing for a more personalized, flexible, and effective educational experience. In this article, we will explore the benefits of a blended approach and how it can be effectively implemented in various educational settings.

Understanding blended learening , Blended learning integrates different modes of education , typically combining in-person classroom experiences with digital resources and online activities.this hybrid model allows educators to leverage technology while maintaining the benefits of direct interaction with students . key components often inciude: Online Learning platforms: utilization of learning management system(LMS) that provide access to course materials, assessments, and resources.

Interactive Activities: incorporation of multimedia , simulations, and gamified content to engage students and enhance understanding.

Flexible scheduling: 0pportunities for students to learn at their own pace and revisit content as needed.

Benefits of a Blended approach

- **1)personalization of Learning**
  One of the most significant advantages of blended learning is the ability to tailor education to individual student needs. By Providing access to a variety of resources,
  Students can choose learning paths that align with their interests and learning styles.
  This personalized approach fosters greaterownershiop of learning , leading to improved motivation and outcomes.

- **2) Enhance student engagement**: Hybrid learning can break up traditional lecture formats by moving some content delivery online. This frees up classroom time for more interactive activities, discussions,and collaborative or projects that can boost student engagement.
- **3) Improved Accessibility**: Hybrid models can expand access to education for students in remote locations or those facing challenges attending in person classes due to illness or other commitments.
- **4) development of critical Skills**: Blended learning encourages the development of essential 21 st –century skills, such as critical thinking ,collaborative , and digital literacy. Students are often required to work on projects, participate in discussions, and utilize technology skills that are crucial for success in todays workforce.
- **To Create a blended learning approach**:
- Identify Learning objectives: determine the Specific learning goals and outcomes the blended approach aims to achieve.
- Choose Online tools: select appropriate digital resources, learning management systems, and online platforms to support the delivery of content and interaction.
- Design engaging content: develop or curate multimedia content that compliments in-person instruction, catering to various learning styles and preferences.

   Conclusion

   Teaching- learning action is continuous process . Hybrid teaching is nothing but blended learning it is very essential today because of it improve the teacher and students knowledge. NEP-2020 has an implicit Blended Learning policy.

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AN EFFECTIVE DEVELOPMENT OF WEB CONTENT PACKAGES USING EXELEARNING AUTHORING TOOL FOR TEACHERS

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Abstract

A web-based learning environment absolutely comprehends a technological element, as most learning goes on through the computer medium. Accessibility to an easy learning environment is necessary, as an effective web-based learning circumstances must support learning anytime, anywhere. Furthermore, interface design is critical, as it regulates the usability of the learning environment. Interface design should focus on ease of learning, ease of use, and aesthetics. The rapid development of ICT has provided a strong technical platform that makes constructivist learning via the Internet and MOOCS more feasible and makes it easier to implement more opportunities in web-based learning contexts in one learning platform. This study explores the theory of Vygotsky social constructivist learning perspectives that can be used in designing, developing, and implementing Web-based learning environments (WBLEs) through open access software eXelearning Authoring tool. eXelearning is a software used to create educational interactive web content. It gives a dynamic interactive web context based on the social constructivist theory and eXe model for the design and development of web content. This study aims to design, develop, and study the Effect of web content packages for Student Teachers by using eXelearning for effective teaching.

Keywords: eXeLearning, eXeLearning tools, WBLE, Interactive Web Content, Social Constructivism.

Introduction: Vygotsky believed that the life process of development depends on social interaction and that social learning leads to cognitive development (Adams, 2006). However, all learning tasks can be performed by learners under adult guidance or with peer collaboration. This theory helps to give a line to the instituting of chances for students to work together with the teacher and peers in constructing knowledge and considerate the learning. Kapur 2018, observed that the social construction of knowledge takes place in various ways and in diverse situations. It could be achieved through group discussion, teamwork, or any instructional interface in an educational or training institution, social media forum, or religious marketplaces. As students interrelate with people, the material and immaterial environment, they gain understanding and gather experience which is needed to live efficacious and functional lives. The propagation of Web-based technologies has given the impression of widespread changes in education (Dorgu, 2015). Web-based technologies offer exhilarating opportunities for intensifying the capacity to provide access to instruction and knowledge worldwide. However, (Borthwick, 2017)claims that viewing these technological advancements in a more dynamic context, with the application of social constructivist theory, forces educators and researchers to rethink the essential teaching and learning processes in web-based learning environments for more interactive learning. (Bryceson, 2007) It's not just a simple matter of using a technical tool to supply time and place ubiquity but to accept the challenge of understanding the implications for the entire educational spectrum (Alenezi,2020). Web-based teaching and learning supplicates the demand of what exactly these technologies mean for learners, teachers, program designers, academic experts, technical and administrative staff, institutional pronouncement makers, training managers, publishers, and others (Milman,2005). Although extensive exploration has been conducted concerning web-based learning technologies, the extensiveness and scope for interchange and investigation need to be broadened. The Web is an innovative educational tool that presents teachers and learners with a technology that provides something to talk about (content) and means to hold the interaction. Unfortunately, (Adams,

2006). The power of this hypertext medium is constrained in educational settings because the vast majority of teachers and academics do not have the technical skills to build their own web pages and must, therefore, bank on the availability of web developers to generate professional-looking online content (Morrison, 2010). The eXe application is being developed to overcome a number of identified limitations. It offers a choice of style sheets and is a simple way of creating HTML pages and adding pictures or online journal articles to a page and no need to use HTML or professional web authoring programs, as there is an easy HTML editor that can paste from Word. EXe-Learning Media is a media that permits teachers and academics to design, develop, and publish web-based learning content without the need for HTML, XML, or web application creation skills. eXeLearning is an open and free software tool under GPL-2 that can generate educational interactive web content. eXeLearning can generate interactive content in XHTML or HTML5 format and produce easily controllable web pages, including text, images, interactive activities, image galleries, or multimedia clips (Exe.2021). Unlike digital formats, all the educational resources generated with eXeLearning can be exported to be used autonomously or to integrate into a LMS like Moodle. The eXeLearning is a program with which we can create content interactive web content, integrate them into training platforms, and provide them with collaborating activities for students. The eXeLearning XHTML editor (eXe) is a web-based authoring environment designed to support teachers and academics in the design, development, and publishing of web-based learning and teaching resources without the need to become skillful in HTML, XML or complicated web-publishing applications.

History of eXeLearning Authoring Tools: The eXeLearning was initially established in New Zealand, in 2007, and was led by two universities, the University of Auckland and Auckland University of Technology as well as by the Tairawhiti Polytechnic Institute. This was formerly reinforced by the New Zealand government, and it was later supported by many other institutions. A new eXeLearning website was recognized, a site that permits the users to contribute to the project, actively assist, and provide suggestions (Exe.2021), find answers to different questions, etc. Now, the project is, again, alive and kicking, and it is supported by different government agencies and companies all over the world due to need of technical advancement in teaching and learning. In 2013, eXeLearning evolved as a web development, which was then written in Python + Ext JS and can be used with the default or preferred browser of the user, accomplished to work, or executed in different browsers. This can be seen in the recent release of eXeLearning 2.0. With advanced features at many interactive levels and activities. The eXelearning allows the inclusion of several different types of file or web-based resources in web content. These include images, media (video and audio clips), mathematical graphics (using LaTeX), and accessories of any file type, and are obtainable to any iDevice's TinyMCE-based rich-text fields. In most all cases, there is a chance for the high quality of either embedding the actual file into an e-learning package or providing an external link to web-hosted resources for the use of teachers and learners.

Outline of eXelearning Authoring Tools: Since there is a need for interactive web content to enhance teaching, using eXelearning will be more helpful in designing the web content for the student teacher to present during the class. we can develop a learning structure that suits the content delivery needs and construct a flexible and easily updated resource. The Outline pane of the eXelearning Control Panel empowers us to design an outline that reproduces the preferred hierarchical structure and arrangement. This can be established at the outset or can develop as the resource is built. The following tools are accommodating when designing interactive web-based content.

a). Embedding Web-based Resources in Development of Web Content Packages using eXelearning: eXelearning allows us to include several different types of file or web-based resources in web content. These include images, media, mathematical graphics (using LaTeX), and attachments of any file type. They are available in any iDevice's Tiny MCE-based rich-text fields. In most cases, either embedding the actual file into an e-learning package or providing an external link to web-hosted resources as an external resource.
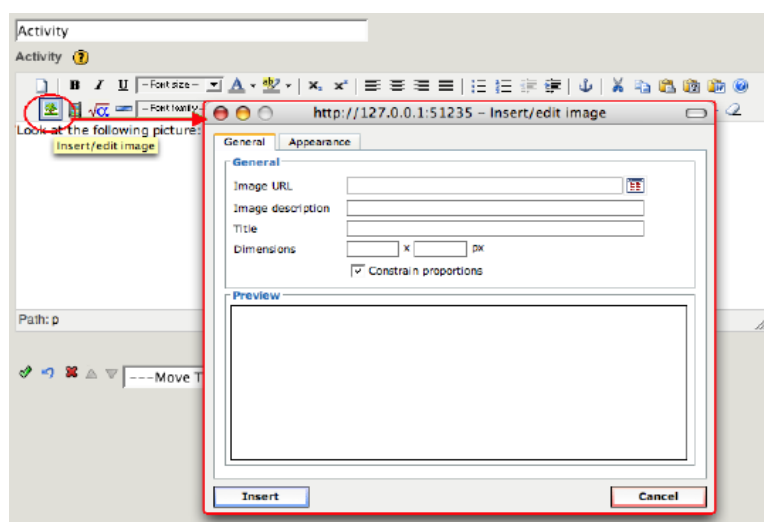
Fig. 1 Illustration of initial steps (File:Exe-Insert-Image-Step01 Dialog.Png - WikiEducator, n.d.)

b). Including Images using eXelearning Tools: Images that are hosted anywhere on the Web may be included in web content. Such images will be linked to content and appear the same as local file-based images, but the image data will not be saved with the same content. This means that the existing eXelearning project and its exported content will be smaller and more "lightweight", but will therefore require network access to the various web locations to view the images. To include a Web-based image within the content, need to specify the URL for the Web-based image into the image dialog's Image URL field and hit [RETURN] to load it into the image dialog box's Preview pane. The following image shows eXe's Flickr-hosted images.

c). Including local File-based Images for Interactive Web Content: Local image files can also be encompassed in the web content. The modification in viewing a File-based image as associated with a Web-based image would be rather unnoticeable, assuming that network connectivity exists to the Web-based image's external web host. It is the productions around network connectivity that really bring file-based images into play. Unlike web-based images, which are apathetically loaded from their external web hosts each time they are viewed, any file-based images will be embedded into and included in the project. To include a local file-based image within web content, click on the image dialog's file-browser button to the right of the image URL field. The following image shows a local file-based image within web content.
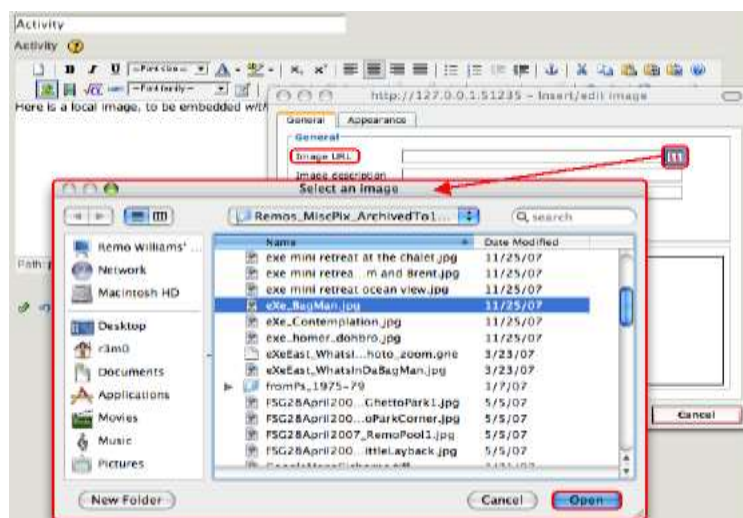
Fig. 2 Process demonstrating step – 02 (File:Exe-Insert-Image-Step02b localFile.Png -
WikiEducator, n.d., p. 02)

d). Including Multimedia, Audio and Video for interactive web content.

The TinyMCE media button allows the inclusion of multimedia objects anywhere within the content, in any rich-text field. As with images, the media button allows for the inclusion of externally hosted web-based multimedia as well as local file-based multimedia.
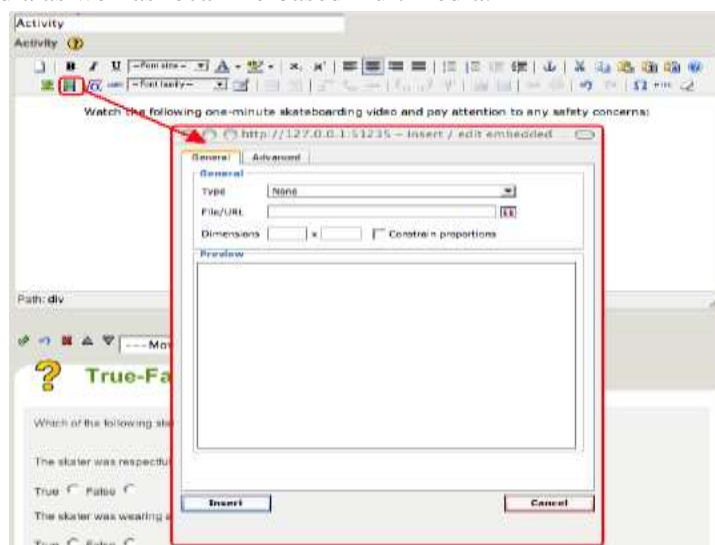
Fig. 3 Media attachment process (*File:Exe-Media-Open-Dialog.Png - WikiEducator*, n.d.).

e). Including Web Links and Attachments

"Navigational" links are those that are clicked from within content, through the web browser, to a new destination page. The resulting destination may be an external website or an internal page of your content. In general, "navigational" links are simply referred to as "links", and may be created for the following image.
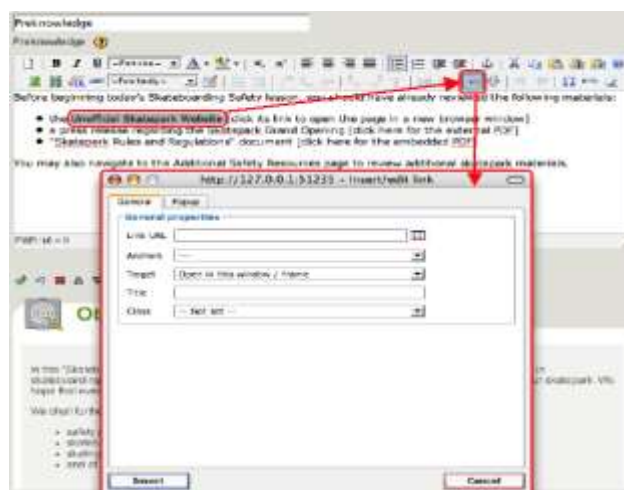
Fig. 5 Procedure to add extension link (File:Exe-Add-Link-Internal-openDialog.Png - WikiEducator, n.d.).

f). Linking to external websites, or, linking to internal anchors

Internal linking is inevitably manageable for each node of the outline pane. Here we can create links in (Web Site) content to any other page in web content. Each node automatically has an internal newscaster at the top of its page, shown as the "auto top" anchor. (Exe,2021) It may even notify that any links to these internal anchors are updated with any changes to the anchor's node name or relative position in the outline pane.
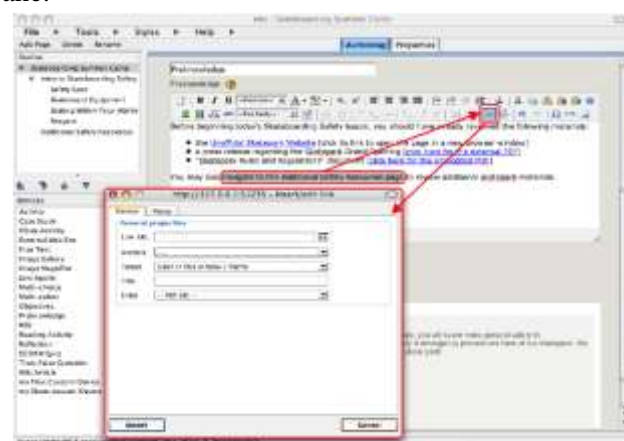
Fig: 6: Linking to external websites (File:Exe-Add-Link-Internal-openDialog.Png - WikiEducator, n.d.).

f). Instructional iDevices for effective web content.

The iDevice (instructional device) panel comprises a collection of structural elements that designate learning content. Learning content is accumulated by selecting iDevices from the iDevice menu and toward the inside learning content. A learning resource may comprise of as few or as many iDevices as obligatory to distribute the learning content effectively. New iDevices are in development, and references for additional iDevices are being sought from the wider learning community. An iDevice publishing supervisor is able to design the own iDevices and templates released in an experimental format as work continues on its development. The eXelearning offers the capability to customize the published content by selecting from a range of graphical grace sheets. (eXe,2021) eXeLearning's

Export facility permits content to be embalmed in two ways. Learning resources can be packaged as a self-contained website for publishing to a web server or as a SCORM Content Package, which will enable the resource to be imported into any SCORM-enabled learning management system With eXeLearning, users can develop a learning structure that suits their content delivery needs and build a resource that is flexible and easily updated in the designed web content. eXeLearning's Export facility allows content to be packaged in a variety of ways iDevices are further divided into two categories, which is used for textual and non-textual information.

1.*iDevices for textual information:*

To present web content, including images, videos, and multimedia, the following iDevices can be used to create interactive web content.

Free text: alike to how to work with a standard text editor.

Objectives: to show the objectives in a emphasized text box and with an icon to emphasize the content.

Prior knowledge: this is proposed to include the contents that the learner must know to undertake an activity. It also seems to highlight text with an icon.

Note: This is intended to include comments and annotations from the content designer. This iDevice will NOT be visible in any of the exported formats.

The Common Cartridge, Content Package, **SCORM 1.2** and **SCORM 2004** formats allow the deployment of prepared content into any standards-based learning management system (LMS)in WBLE (Exe.2021).

2.*iDevices of Non-textual information*

To display external resources that are incorporated into eXeLearning as content (textual or Web), here are the following iDevices:

Wikipedia article: includes all the information of a Wikipedia article, including images and their links.

RSS: makes a copy of the source of a website or blog.

Website: shows an external page within the content of eXeLearning.

Gallery of images: it shows an album of images, initially in miniature format

Magnifying glass: shows an image and magnifies it by means of a magnifying glass effect.

Java Applet: allows for the inserting of different Java applets in the pages of a JClic, Geogebra, Descartes, or Scratch project.

Attached files: it allows to attach the files with their corresponding links as a non-sorted list.

Using of eXelearning Authoring Tool in Web-Based Learning Environment (WBLE)

Web-authoring software involves a steep learning curve; it is not intuitive, and the presentations were not designed to publish learning content. (Lina,2005) Consequently, eXe aims to provide an intuitive, easy-to-use tool that will enable teachers to publish professional web pages for learning. Currently, learning management systems do not offer sophisticated authoring tools for web content (Aloni et.al,2018) compared to the capabilities of web-authoring software or the skills of an experienced web developer. eXelearning is a tool that provides professional web-publishing capabilities that will be easily referenced or introduced by standards-compliant learning management systems in WBLE (Taj & Dange,2016). Most CMS and LMS utilize a centralized web server model, thus requiring connectivity for authoring. (Tsai,2016) This is preventive for authors with low bandwidth or no connectivity. eXelearning can be developed as an offline authoring tool without the requirement for connectivity (Borthwick,2017). Many content management and learning management systems do not provide an intuitive WYSIWYG environment where authors can see what their content will look like

in a browser when published, especially when working offline. The eXelearning will mimic WYSIWYG functionality, enabling users to see what the content will look like when published online. It is a collection of tools to create sequences of online learning activities that can be arranged in any order, and sequences can be branched through simple editing. It can display equations and images without needing to use HTML or web authoring tools with external websites. Exe is an easy way to create simple MCQs and quizzes using various question types, which can be chosen from a range of available style sheets. Different collaborative activities can be provided with proper feedback to the learner. The prepared web content can help the learner to regulate themselves by making available of different SCORM quizzes (Exe.2021). It provides several export formats, such as IMS Content Package, SCORM 1.2, and SCORM 2004, as well as navigable web pages. (Alabo & Emmah, 2014)The integration of multimedia resources is easily achieved; you can freely enhance teaching content with images, sounds, or videos from your hard disk or embed videos from YouTube. The eXeLearning interface proposes a concrete and clear form for analyzing, extracting, and editing web content.

Conclusion: Web-based learning affords multimedia elements, interactive simulations, and adaptive learning technologies to enhance the learning experiences. Synchronous learning will facilitate instant collaboration and communication between students and teachers. WBLE is the most effective method to enhance learning potential, as many research studies claim. eXeLearning is one of the effective tools for authoring learning content where the content can be designed, developed, and published in web pages or an XHTML editing application. This application allows the author to publish content and easily import it into any Learning Management System supporting the SCORM standards. The eXelearning is organized around tools called instructional devices or iDevices; these include a range of pedagogical forms as well as different learning activities, e.g., various question types (true-false, multiple choice, cloze questions), educational games, video and audio materials, external websites, etc. The program is highly suitable even for content creators and teachers with insufficient experience in e-learning and programming. It delivers a simple, structured way to create educational content, and it is pedagogically sustained. The eXelearning is a systematic and scientific approach to developing quality Web-based content that makes instruction and instructional material more engaging, effective and efficient. This application has great utility for teachers of school or high school; its dynamic functionalities of editing level in web contents are highly didactic to help teachers adapt to the new study tool in a digital level. (Morrison, 2010). It is very useful for those teachers who want to know a lot about the functioning of content management systems on the Internet with software such as CMS. All web pages have contents with based on the HTML language, eXeLearning tools allow one to know the language for learning in an informative form where can edit all contents in a simple manner and, at the same time, see the code in XML or HTML is also possible. The main decisiveness of this program is to provide a source if teachers are learning about moving by Internet or preparing their own content as per the learner's needs. Content can be exported in a variety of formats, including ePub3, IMS, SCORM, and XLIFF. Educational content can be classified utilizing metadata models like Dublin Core, LOM, and LOM-ES. The eXeLearning allows the creation of accessible content in XHTML or HTML5 format. Pages can be viewed on various devices, including smartphones, tablets, and laptops when exported as a website.

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DIFFERENTIATED INSTRUCTION AND EXPLICIT INSTRUCTION: A SYNERGISTIC APPROACH TO EFFECTIVE TEACHING READING

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Abstract

This paper explores the concepts of differentiated instruction and explicit instruction, examining their individual benefits and the potential for their synergistic application in teaching. It explores the theoretical motives of each approach, highlighting their distinct characteristics and methodologies. Its brief look at how differentiation strategies applied to reading can be designed to help students learn a range of language skills. Furthermore, the paper discusses the practical implications of combining these strategies, emphasizing the positive outcomes for students of diverse learning styles and abilities. The paper aims to equip teachers with valuable insights into implementing differentiated and explicit instruction to enhance student learning and achievement.

Keywords: Differentiated Instruction, Explicit Instruction, Inclusive Classroom, Cognitive Task Analysis, Assessment, Reading

Introduction: India is a diversified country confront of diversified social identities, socioeconomic status, and different cultural and geographical background. The increasing number of learners from different diverse backgrounds entering classrooms has reinforced the importance of making schools more inclusive, with greater variations in the talents, learning abilities/disabilities, experiences, strengths and ideas. In today's diverse and rapidly evolving educational landscape, teachers are facing with the challenge of meeting the unique learning needs of a wide range of students. Traditional one-size-fits-all approaches to instruction often fall short in addressing the diverse abilities, interests, and learning styles present in the classroom. To foster a more equitable and effective learning environment, teachers must adopt strategies that cater to the individual needs of each student.

An **Inclusive Classroom** is an educational environment that embraces diversity and ensures that all students, regardless of their backgrounds or abilities, have equitable access to learning opportunities. This approach recognizes the unique strengths and needs of each student and fosters a sense of belonging among all learners. By incorporating differentiated teaching strategies and accommodations, inclusive classrooms aim to create a supportive atmosphere where every student can thrive academically, socially, and emotionally.

Differentiated Instruction is a process through which teachers enhance learning by matching student characteristics to instruction and assessment. Differentiated instruction allows all students to access the same classroom curriculum by providing entry points, learning tasks, and outcomes that are tailored to students' needs (Hall, Strangman, & Meyer, 2003). Differentiated instruction is not a single strategy, but rather an approach to instruction that incorporates a variety of strategies. This pedagogical approach tailors instruction to meet the unique needs, abilities, and learning styles of individual students. It recognizes the students of diversified backgrounds, experiences and learning preferences. Here teacher adjusts their curriculum and instruction to maximize the learning of all students including students with learning disabilities, average, gifted and talented students. It is effective in meeting the individual needs of the learners by an effective and equitable learning environment.

Explicit Instruction is a series of instructional behaviors that increase the likelihood for student achievement. Explicit insruction means a clear-cut and finite way of teaching that includes both instructional and delivery procedures. Rosenshine (1987) described explicit instruction as "a

systematic method of teaching with emphasis on proceeding in small steps, checking for understanding, and achieving active and successful participation by all students."

This instructional method emphasizes the importance of clarity, modeling, guided practice, and immediate feedback, making it particularly effective for learners of all ages and abilities. By laying a solid foundation for understanding, explicit instruction helps students acquire essential skills and knowledge systematically.

Theoretical motives: Tomlinson and Imbeau (Citation2010) have stated that "the core of the classroom practice of differentiation is the modification of four curriculum-related elements – content, process, product, and affect – which are based on three categories of student needs and variances – readiness, interest, and learning profile" (p. 15). Bosker (Citation2005) adopted a broader approach, defining differentiation as adapting "aspects" of education (such as student grouping, learning goals, teaching time, or instructional strategy) to "differences" between students (primarily regarding performance and readiness, but also, for example, regarding intelligence, personality, or motivation). Roy, Guay, and Valois (Citation2013) described differentiated instruction as "an approach by which teaching is varied and adapted to match students' abilities using systematic procedures for academic progress monitoring and data-based decision-making" (p. 1187). Each of these definitions stresses the adaptation of aspects of instruction to differences between students. However, it remains uncertain what "high-quality" adaptations are, how this is enacted in classrooms, and what is required from teachers (Deunk et al., Citation2015; Park & Datnow, Citation2017). To obtain insights into the practice and quality of differentiated instruction and to determine how providing DI could be trained and assessed in practice, the literature has been reviewed for instruments that researchers have used to measure the quality or degree of differentiation, as the construction of such instruments requires an explicit operationalization of teacher behavior.

Distincit characteristics and methodologies: The key to successful differentiation is not the application of strategies, but the actual adaptation of teaching to the thoroughly identified needs of all students. "Meeting the needs of all learners" assumes that teachers "have an accurate view of students' levels of understanding, and that they know which instruction and learning activity is appropriate for children at different levels, given the goal they strive for" (Deunk et al., Citation2015, p. 52). This relationship between the goals, students' needs, and the provided instruction is reflected in the skill hierarchy. In this hierarchy, the relationship between the preparation of a lesson period, a lesson, the enactment of a lesson, and the lesson evaluation is essential for differentiating instruction during a lesson. This is in line with the work of Parsons et al. (Citation2018), who found adaptive teaching in all phases of instruction, during planning, in the midst of teaching, and when reflecting on their instruction. Furthermore, the performance indicators showed that effective differentiation is not only complex due to the interrelatedness of these chronological phases, but also because the core of differentiation is in deliberate and accurate choices. These choices must be based on a variety of well-considered goals and the analysis of students' instructional needs, in combination with continuous monitoring of student progress and adapting on. Differentiated instruction and explicit instruction represent two powerful approaches to teaching that, when combined, can significantly enhance student learning and achievement. Differentiated instruction involves tailoring instruction to meet the diverse needs of learners by providing multiple pathways to learning, varying the level of challenge, and offering flexible grouping arrangements. Explicit instruction, on the other hand, is a systematic approach that involves clear and direct teaching of specific skills and knowledge. The need for

differentiated and explicit instruction arises from the recognition that students possess diverse learning styles, abilities, and backgrounds. Traditional one-size-fits-all approaches often fail to meet the needs of all students, leading to disengagement, frustration, and academic difficulties. By employing differentiated and explicit instruction, teachers can create a more inclusive and equitable and effective learning environment where all students have the opportunity to succeed. Differentiated instruction allows all students to access the same classroom curriculum by providing entry points, learning tasks, and outcomes that are tailored to students' needs (Hall, Strangman, & Meyer, 2003). Differentiated instruction is not a single strategy, but rather an approach to instruction that incorporates a variety of strategies. Teachers can differentiate content, process, and/or product for students (Tomlinson, 1999). Differentiation of content refers to a change in the material being learned by a student. Teachers differentiate according to a student's readiness, interest, and learning strategies. Readiness refers to the skill level and background knowledge of the child. Interest refers to topics that will motivate the student. Lastly, a student's learning style (i.e., a visual, auditory, tactile, or kinaesthetic learner), grouping preferences (i.e., individual, small group, or large group), and environmental preferences (i.e., lots of space or a quiet area to work). A teacher may differentiate based on any one of these factors or any combination of factors (Tomlinson, 1999). This paper will explore the theoretical foundations, practical applications, and potential benefits of combining differentiated and explicit instruction in the classroom. By examining the strengths of each approach and the synergies that can emerge when they are used together, teachers can gain valuable insights into how to create inclusive and effective learning environments for all students.

Objectives

Differentiated Instruction and **Explicit Instruction** are two educational approaches that share the common goal of enhancing student learning and ensuring that all students have the opportunity to succeed. While they have distinct characteristics, their objectives often intersect.

1. To define differentiated instruction and explicit instruction in teaching reading.
2. To explore the potential benefits of combining differentiated and explicit instruction in reading.
3. To provide practical examples and strategies for implementing differentiated and explicit instruction in teaching reading.
4. To address potential challenges and considerations related to the use of these approaches.

Practical implementations of these strategies: Teacher prepared required assessments tools to measure the students learning abilities. The assessment tool helps the teacher in grouping students based on their advancement in learning, their prior knowledge, abilities, interest, and readiness towards learning so that they can group students according to their abilities. Then teacher uses the style of instruction or a learner centered curriculum to work with a suitable learning environment.

How is it implemented?

Implementation looks different for each student and each assignment. Before beginning instruction, teachers should do three things:

1. **Use** diagnostic assessments **to determine student readiness.** These assessments can be formal or informal. Teachers can give pre-tests, question students about their background knowledge, or use KWL charts (charts that ask students to identify what they already **K**now, what they **W**ant to know, and what they have **L**earned about a topic).

2. **Determine student interest.** This can be done by using interest inventories and/or including students in the planning process. Teachers can ask students to tell them what specific interests they have in a particular topic, and then teachers can try to incorporate these interests into their lessons.

3. **Identify student learning styles and environmental preferences.** Learning styles can be measured using learning style inventories. Teachers can also get information about student learning styles by asking students how they learn best and by observing student activities. Identifying environmental preferences includes determining whether students work best in large or small groups and what environmental factors might contribute to or inhibit student learning. For example, a student might need to be free from distraction or have extra lighting while he or she works.

Teachers incorporate different instructional strategies based on the assessed needs of their students. Throughout a unit of study, teachers should assess students on a regular basis. This assessment can be formal, but is often informal and can include taking anecdotal notes on student progress, examining students' work, and asking the student questions about his or her understanding of the topic. The results of the assessment could then be used to drive further instruction.

What does it look like for reading?

Differentiation strategies applied to reading can be designed to help students learn a range of skills including, phonics, comprehension, fluency, word prediction, and story prediction. The chart below offers a variety of strategies that can be used.

Process/strategies:

The process of implementing differentiated and explicit instruction involves several key steps:

Conduct Ongoing Assessments

Effective differentiated instruction requires regular assessments of student learning. The results should help educators determine which educational approaches are working—and which require adjustments to best reach students.

Assign Fulfilling Tasks

Instead of assigning some groups of students more engaging activities than others, educators should work to ensure that all groups of students receive assignments that are fulfilling, according to the styles of learning that are most likely to connect with them.

Vary Student Groups

Another differentiated instruction strategy likely to yield positive results is varying the groups with which students work. To encourage students to interact with various classmates, on some days, teachers can assign students to work with those who are similar to them in learning readiness; on other days, teachers can assign them to work with those with the same preferred learning style.

Build Classroom Rapport

Mixing up the groups in which students participate is one way to build rapport among those in the classroom. Another strategy for developing relationships—and encouraging honest conversations that can inform differentiated instruction practices—is for educators to communicate openly with students about their interests and past experiences.

Scaffolded Activities

With scaffolded activities, teachers assign different types of tasks to different groups of students according to their own characteristics. Reading materials related to the lesson are at appropriate levels for each group, for example. Alternatively, some groups engage in visual lessons while others' lessons cater to their preference for auditory learning.

Technology-Enabled Instruction

With technology-enabled instruction, students choose between synchronous or asynchronous learning using technological tools such as tablets. Another differentiated instruction example is to accommodate the ways that students communicate, using interactive whiteboards for those with speech limitations.

Uses

Both differentiated and explicit instruction can be utilized across various subject areas and educational levels. Differentiated instruction is particularly effective in heterogeneous classrooms, where students possess varying levels of readiness and interests. Explicit instruction is often employed in subjects requiring foundational knowledge, such as mathematics and literacy, where clarity and structure are crucial for student success.

Differentiated and explicit instruction can be used in a variety of educational settings, including:

- **General Education:** In regular classrooms, these approaches can help meet
- the diverse needs of students with varying abilities and learning styles.
- **Special Education:** Differentiated and explicit instruction can be particularly effective for students with special needs, as they allow for individualized instruction and support.
- **English Language Learners:** These approaches can help English language learners develop language skills and content knowledge in a supportive and engaging way.

Benefits

The benefits of combining differentiated and explicit instruction include:

- **Increased Student Engagement:** Students are more likely to be engaged and motivated when instruction is tailored to their needs and interests.
- **Improved Academic Performance:** Differentiated and explicit instruction can lead to improved academic outcomes for students of all abilities.
- **Development of Critical Thinking :** These approaches encourage students to engage in higher-order thinking, promoting deeper understanding and retention of content.
- **Support For Diverse Learners:** Both methods provide essential scaffolding for students with varying abilities, including those with learning disabilities or English language learners.
- **Enhanced Social Skills:** Working in collaborative groups and engaging in meaningful discussions can help students develop important social skills.
- **Positive Classroom Culture:** A classroom that fosters differentiation and explicit instruction can create a positive and inclusive learning environment.

Challenges of this approach to teaching and learning It is clear from studies conducted over the past decades that teachers encounter difficulties in accommodating students' individual differences by applying differentiation strategies in practice, and particularly in sustaining their use over time (e.g. Read, 1998; Schumm & Vaughn, 1991; Simpson & Ure, 1994; Ysseldyke, Thurlow, Wotruba & Nania, 1990; Westwood, 2001). The major challenges of differentiation include limited preparation time, large class size, teachers' heavy workload, lack of resources, teachers' lack of skills in differentiation, and teachers' lack of motivation to differentiate (Chan, Chang, Westwood & Yuen, 2002; Scott, Vitale &

Masten, 1998; Westwood, 2002) As Merrill stated (2002), most effective learning environments start with a meaningful problem that provides the focus on four phases of instruction: activation of existing knowledge (including skills), demonstration of new knowledge, application of new knowledge, and integration of new knowledge into the learner's world. The results of all consulted studies indicate the positive impact of the differentiated approach to teaching and learning in the diverse classroom, and, nevertheless, requires an emergent need for the improvement of teachers' knowledge and skills. The teachers can treat these facts with resignation and resistance or they can turn them into moments of self-knowledge, deeper understanding of students' diversity as connected to human nature development. This study highlights the necessity of mapping teachers' educational needs in the field of differentiated instruction and demands an appropriate approach by adapting teacher training programs in order to train teachers' self-efficiency in differentiated educational practices. Furthermore, it is very important to develop teachers' positive attitudes towards differentiation and to promote the culture of diversity by developing a coherent understanding of the implications of knowledge for diverse learners concerning the practice of teaching.

Suggestions: Differentiated instruction is meant to fill the gap between teaching and learning. It is our sincere belief, however, that a teacher whose educational obligations and practices reflect masterly of these principles will do better than average assessment job of student achievement, designing durable and adequate strategies and tools to support a differentiated approach to teaching and learning. To effectively implement differentiated and explicit instruction, teachers should consider the following suggestions

Professional Development: Seek out opportunities for professional development to learn more about differentiated and explicit instruction.

Collaboration: Collaborate with colleagues to share ideas and best practices strategies for effective implementation.

Utilization of Technology: Incorporating educational technology can facilitate differentiation and support explicit instruction by providing personalized learning experiences.

Continuous Assessment: Regularly assess student progress to inform instruction and adapt strategies as needed.

Student Input: Involve students in the differentiation process to help them take ownership of their learning.

Flexibility: Be prepared to adjust instruction as needed to meet the evolving needs of students.

Conclusion: This paper provides an overview of differentiated instruction and explicit instruction, offering insights into their significance in present education. Both Differentiated Instruction and Explicit Instruction are designed to enhance student learning and ensure that all students have the opportunity to succeed. While Differentiated Instruction focuses on tailoring instruction to individual needs, Explicit Instruction emphasizes clear explanations, guided practice, and feedback. By combining these approaches, teachers can create a more effective and inclusive learning environment. The present study is a part of a larger-scale research including a series of focus-groups, classroom observations, content analysis regarding the challenges teachers typically experience and how they can be overcome in order to gain understanding of the impact of the differentiated approach to teaching and learning. The major challenge is to get differentiation visible. The more this aspect is underlined the more the teachers will get attracted by its positive effects on their teaching routines and student achievement.

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INFLUENCE OF THEATER GAMES FOR EFFECTIVE TEACHING AND LEARNING PROCESS

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Introduction: Theater games are an essential tool in the field of drama and Theatre Education, but their impact goes far beyond the stage. They can be highly influential in enhancing movement, expression and communication skills among students, fostering a deeper engagement with learning and promoting personal and social development. These games are interactive, playful and creative, providing a safe environment for students to explore their physical and emotional range. Incorporating theatre games into teaching practices encourages students to develop a heightened sense of awareness of their bodies, voices and emotions. This experiential approach engages students in an active, embodied form of learning, enhancing their ability to express themselves clearly and confidently. It taps into multiple learning styles-Kinesthetic, auditory and visual making the learning experience more dynamic and inclusive. In the modern classroom, where diverse learning styles and needs must be addressed, theater games offer an innovative and impactful approach to teaching..Traditionally confined to teaching drama classes, these interactive and playful activities have demonstrated significant value in enhancing learning across various subjects by engaging students physically, emotionally and intellectually. Theater games are structured activities that use elements of performance, such as movement, expression, and improvisation to encourage active participation, creativity, and collaboration among students. By fostering a learning environment where movement and expression are integral, these games enhance not only student engagement but also cognitive and emotional development.n Movement and expression are powerful tools in effective teaching because they activate multiple learning modalities and provide students with more dynamic ways of interacting with a material. Movement involves using the body to learn, whether through gestures, physical activities ,or performance, while expression allows students to communicate their emotions, ideas and thoughts in more profound ways, whether through verbal language, body language, or creative outlets like art and role-play. These two elements when combined through theatre games, create a holistic, active learning environment, that challenges traditional method.

Movement and Expression Game: Movement and Expression are crucial components that convey character's emotions, intentions and personality without the need for dialogue. These elements allow actors to communicate with the audience through body language, facial expression, and gestures, often enhancing or replacing verbal communication.

Movement in Drama: Movement in drama refers to how actors use their bodies to portray a character or tell a story. It includes postures, gestures, and spatial relationships with other actors or objects on stage. Effective movement can reflect a character's mood, status, or relationship dynamics. It can also help set the tone of a scene and make the performance more visually engaging.

- **Posture and Body Language**: A character's posture can reveal confidence, insecurity, nervousness, or authority.
- **Gesture**: The use of hand movements and other body parts to emphasize certain emotions or actions
- **Space and proxemics**: The use of space on stage. The distance between characters can signify their relationship or emotional state.

- **Choreographed movement**: In some performances, movements are highly choreographed, especially in physical theater or dance drama

Expression in Drama

Expression in drama refers to the way emotions and thoughts are conveyed primarily through facial expressions, tone of voice, and intonation, but also through physical gesture

- **Facial Expressions**: A subtle or exaggerated facial expressions can instantly communicate a character's emotions, from joy to sorrow to anger .Face often serve as the focal point for conveying complex emotional states.
- **Vocal Expression**: Tone, pitch, pace and volume of speech influence how words are interpreted by the audience. An actor might speak slowly to show thoughtfulness, or raise their voice to express anger
- **Emotional Range**: Expressing a wide range of emotions convincingly is key to drawing on audience into the story and making characters feel real.

Objectives

Convey emotions non-verbally : the primarily objective is to express a character's emotions without relying solely on dialogue . through body language , facial expressions and gestures , actors can communicate feelings such as joy, fear, anger, or sadness , making the emotional tone of the performance clearer and more impactful.

Enhance character development: movement and expression help actors develop a more nuanced and believable portrayal of their characters. By embodying a character's physical traits such as postures , walk ,or mannerisms actors can reflect personality traits , status or internal conflict , which adds depth to the character .

Strengthen visual story telling : one of the objectives is to make the story visually engaging movement can be used to show key plot points or themes without needing explicit dialogue.

For example : the way character move around each other can symbolize their relationships, power dynamics or emotional distance .

Engage and audience : effective use of movement and expression keep the audience engaged and immersed in the performance . it adds a dynamic layer that holds attention and evokes emotional responses , making the viewing experience more compelling .

Support dialogue and enhance communication : movement and expression are used to support and enhance spoken lines , giving more meaning to the dialogue .

For example : the way a line is delivered in combination with a gesture or facial expression can convey irony , subtitle , or subtext or layered emotions that aren't immediately clear from the words alone .

Create atmosphere and tone : movement and expression help set the atmosphere and tone of the scene . whether it's a high energy , fast paced moment or a quiet , introspective scene , the mood and rhythm, enhancing the emotional impact of the scene .

Build physical relationships between characters   : another key objective is to establish and communicate the relationships between characters. By using physical proximity , gestures and facial reactions , actors can show whether characters are close , distant, antagonistic or affectionate , even a word is spoken .

Explore symbolism and metaphor : movement and expression are often are used to explore deeper meanings , metaphor , or symbolic elements , within a performance . for instance , repetitive movements

or abstract gestures can represent larger themes like oppression , freedom or identity adding layers to the narrative .

Create rhythm and pacing : movement and expression help control the pacing of a performance by slowing down or speeding up actions , actors and directors can influence the tension and energy of a scene . this contributes to the overall rhythm of the production, guiding the through different emotional beats .

Establish physical and emotional space : through movement , actor's define the they inhabit , both physically (on stage) and emotionally (within the story). The way actors occupy space can suggest dominance , vulnerability , isolation or intimacy , helping to create a more immersive environment for the audience .

Promote actor freedom and creativity : a further objective is to explore and express their characters creativity . movement allows to experiment with now their character might physically interact with the world around them , encouraging spontaneity and creativity in their performance .

Create a memorable expression : ultimately , the goal of movement and expression is to create a memorable , emotionally resonant experience for the audience . by adding these physical and emotional layers , the performance becomes more impactful and stays with the audience long after the show ends The objectives of movement and expression in drama are to enhance emotional communication.

Process of movement and Expression in Game

This process involves several steps that actors and directions use to effectively convey the story and emotions . Here's a key stages

Understandings the character:
- Actors begin by deeply understanding the character they are portraying .This includes studying the script to analyze the character's motivations, relationships, and emotions
- They identify key traits like postures, energy level, and specific gestures that suit the character's personality and emotional state

Physical warm up
- Actors often start with physical warm ups to prepare their bodies for the expressive work needed. This include stretching, breathing exercises and other moment techniques to increase flexibility and body awareness.
- Vocal warm- ups also help to improve vocal expression and control

Experimentation with movement and Expression:
- Actors experiment with various movement and facial expression in rehearsals to find those that best suit the characters and the emotional tone of the scene
- Directors may guide actors through different physical interpretation of the character to find the most effective portrayal

Blocking and spatial awareness:
- Blocking refers to the planned movement patterns on stage .Actors work with the direction to establish where they will move and how they will interact with others characters or objects on stage.
- The use of space-whether standing close to or far from other characters-can express relationships, tension or isolation

Refining gesture and postures:
- Specific gesture (such as hand movements or the way a character stands) is refined during rehearsals. These help to communicate emotions non-verbally.
- Posture is crucial to defining how a character feels in the moment-whether they are relaxed, tense, fearful.

Facial Expressions and Eye Contact:
- Actors practice varying their facial expressions to show subtle shifts in emotions, from happiness to anger to sadness.
- Eye contact can be a powerful tool for connecting with other characters and the audience, helping to convey emotions and intent.

Integration with Dialogue:
- Actors work on synchronizing heir physical movements and expressions with the delivery of dialogue. This ensures that their body language supports what they are saying, making the performance more believable.
- The tone and pace of speech are aligned with the physical actions, giving a cohesive emotional impact.

Feedback and Adjustments:
- Directors provide feedback during rehearsals, suggesting the adjustments to the movements, expressions or timing of certain actions.
- Actors continuously fine-tune their performance based on feedback, enhancing the believability and emotional depth of the character.

Rehearsal and Repetition:
- Repetition is key to making movements and expressions natural and consistent throughout the performance.
- Through continued rehearsals, actors internalize the physical and emotional traits of their characters, allowing them to perform effortlessly in front of an audience

Live Performance
- In live performance, actors combine everything they have practiced – movement, facial expressions ,gestures ,and vocal one-to create a compelling and fluid portrayal of their characters
- They may adjust their performance slightly based on audience reactions or the dynamics of the scene during live shows.

In Summary, the process of movement and expression in drama is a collaborative and evolving practice that requires careful preparation ,experimentation ,feedback ,and rehearsal, it allow actors to embody their characters fully ,making performances more engaging and authentic for the audience.

Combined impact of movement and expression games: When combined effectively , movement and expression provide a multi dimensional portrayal of characters, helping to make their experience and relationships feel more dynamic and believable. Together , they create an immersive experience for the audience , ensuring that emotions and stories are conveyed even without dialogue . movement and expression in drama are vital for helping to create a connection between the actors and the audience . in drama the combined impact of movement and expressions work together to create powerful and impactful performance . in drama these both are very essential for creating a compelling performance

as it brings the script to life in a way that resonates emotionally , intellectually and visually with the audience .

The Results of Effective Movement and Expression Game

- Enhanced emotional connection for the audience and also for the actors.
- Clear communication of character intentions and relationships.
- Stronger Storytelling and vocabulary building
- Visual and aesthetic appeal
- Improved clarity in non-verbal scenes
- Engagement and Immersion
- Creative and critical thinking and abstract
- Problem solving and Innovations and active learning
- Collaboration and social skills-Team work
- Enhanced communication skills-Non-verbal and verbal expression
- Improved emotional Intelligence-Empathy and self-expression
- Improved physical co-ordination and spatial awareness-movement, body language awareness
- Increased confidence and self-esteem
- Performance opportunities and ownership of learning
- Cultural and Social awareness
- Enhance memory and retention –Active learning and Experiential learning
- Stress relief and emotional well-being-catharsis and relaxation
- Deeper engagement with Subject matter
- Multi-Sensory learning and connection to real life
- Development of Leadership Skills
- Strengthened Cognitive Development
- Enhanced literacy and Language skills
- Improved writing and storytelling
- Increased motivation and enthusiasm of learning
- Enhanced understanding of Complex Concepts
- Personalized and differentiated learning
- Self-paced learning
- Support for Social and Emotional Learning(SEL)
- Encouraging critical reflection and metacognition
- Reflective thinking, self-awareness and Social responsibility
- Improved inclusivity and classroom dynamics peer bonding and breaking barriers
- Facilitating interdisciplinary learning
- Improved resilience and adaptability
- Improved visual and performing arts skills

Incorporating effective movement and expression into teaching through drama not only supports subject specific learning but also contributes to the overall cognitive, emotional, social development of students. It enhances creativity, collaboration, and communication and critical thinking, making it a powerful tool for holistic education.

Conclusion: The combined impact of movement and expression in drama is central to creating an immersive and emotionally engaging performance . together they enhance the depth of a character, communicate non verbal cues , and elevate the storytelling beyond dialogue . when these elements work in harmony , they not only convey a character's and intentions but also shape the audience's perception of the narrative , adding layers of meaning and heightening the overall dramatic experience .

Movement and expression are essential elements in drama that significantly enhance the depth meaning and impact of a performance . through carefully crafted body language , facial expressions , and gestures , actors can convey emotions , character dynamics , and the underlying subtest of a story without relying solely on dialogue .these techniques allow for more engaging and visually stimulating storytelling , strengthening the emotional connection between the actors and the audience . by mastering movement and expression , actors add layers of meaning and create a powerful , memorable theatrical experience

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INDIA'S DIGITAL EDUCATION MARKET: CHALLENGES AND OPPORTUNITIES

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Abstract

One of the most crucial instruments available today for fostering the growth of people, families, businesses, and the economy is education. The new digital technologies are making a major revolution by revolutionizing all elements of education in teaching, learning, evaluation, and feedback. The key repercussions of COVID-19: a total of 320 million learners in India have been adversely affected and have switched to e-learning. Digital technologies are reshaping the traditional model of education, creating more dynamic and interactive learning environments. The online learning platforms provide a flexible and accessible way for individuals to acquire new skills, pursue academic degrees, and engage with educational content from the comfort of their homes. The current online learning market in India is anticipated to grow at a robust rate through 2029, with a projected CAGR of 18.87%. As of 2023, the market was valued at USD6.41 billion. There is a long way to go for digital education to gain momentum in India as the majority of India lacks the required digital bandwidth. The growth of digital services in schools has been hampered by a few issues, including low internet penetration, inadequate infrastructure, and poor access to electricity in semi-urban and rural areas. In order to address these challenges and create a stable environment that can increase the use of digital technologies, it goes without saying that government participation is needed. In spite of the abovementioned challenges, India's booming urban areas provide an excellent opportunity for digitalization of education services to increase the quality of education with the latest digital technological know-how. The majority of the schools and universities are trying to keep pace with the digital changes by implementing them. Thus, by empowering educators, digital technology holds the key to India's educational challenges. This research article's objective is to outline the opportunities and challenges that face learners, educators, governments, and society at large, ensuring that digital learning genuinely transforms as an instrument for the empowerment and dissemination of knowledge across the country.

Key Words*: Post-Covid Era, Digital learning, Challenges, Opportunities.*

I.   Introduction: Education is in an interesting transitional phase between its 'ICT-free' past and its 'ICT-aware' future. That it is in such a transition is a fairly safe claim. Over the centuries prior to digital technology, education evolved into a system that used paper technology in a variety of highly sophisticated ways to fulfill its mission to develop and accredit knowledge and skills. Its future must certainly be one in which it extends this capacity to a sophisticated use of digital technology. Like every modern enterprise, education is currently learning and adapting to the opportunities afforded by information and communication technologies, albeit slowly. Learning technologists make it their business to accelerate the process because the learning cycles of the education system are long, while those of its immediate environment youth culture, employment demands, and scientific knowledge are short, and changing ever more rapidly.[1] Online education is a form of education where knowledge is imparted or gained electronically. It can also be defined as imparting knowledge to the students with the help of a device having internet connection. Evolution of computers, emergence of internet and development in information and communication technology has made significant changes in the education system.[2] The use of online learning platforms is one of the most significant changes to India's digital education systems. Students can use these platforms to learn from home, access educational resources, and participate in online forums and discussions.[3]

 In India during COVID-19, there was a drastic change: the traditional education system shifted and an increase in online education as physical distancing was prioritized. The online education system fundamentally ponders over professionalism and high-quality, rich, engaging presentations that grab

students' attention. Propagating learning effectively has been considered the main strength of digital education in India. Systematic two-way modes of communication are widened to pave the growth towards development.

While at the time of Pandemic Covid-19, digital education has supported millions of students in India and entangled suitability growth for future adversity and compliances. The usage of systematic tools and methods has improved, as has the widened student engagement and reimbursed the efficacy of digital teaching. Despite this strengthening approach, digital education persists through challenging events, providing breakthroughs in innovative modes of teaching.[4]

This article attempts to discuss both pros and cons of digital/online education in India and attempts to point out opportunities for growth of students learning and teaching on digital platforms, the other side hampering students' and teachers' development significantly. Online education has witnessed in India, especially during COVID-19; however, some problems and challenges have been observed regarding this sudden change in the traditional education system.

II. Objectives of the study: The following objective of this research paper:

1) To study about the importance of digital education in present scenario of India.
2) To identify the challenges and opportunities of online education for various stakeholders.

III. Research Methodology:

The method of research is purely doctrinal, and secondary sources are utilized, i.e., books, journals, researcher papers, statistical data, and the completion of my paper. Instead of this, I have collected primary sources of data. One of the researchers conducted a web survey in Karnataka, Tamil Nadu, and Kerala during the COVID pandemic.

IV. India's Digital Education Market :

Digital education is an umbrella term for any "education that is conducted at least partly in, with or through digital technologies. This is a deliberately broad definition that could encompass the use of technology in traditional classrooms, blended learning (which combines online and face-to-face instruction) and education that takes place entirely online. In the 21st century, digital technologies are often an unseen part of daily life, from online banking, social media and streaming services, to education or work-specific activities such as email, PowerPoint presentations, and PDF handouts. However, when it comes to more overtly digital technologies such as the Virtual Learning Environment (VLE), or creation or use of digital media resources, or adoption of pedagogical approaches specifically related to digital education things can feel a bit more daunting. It provides many opportunities to engage learners personalize learning experiences and widen access. It can make it easier for learners and educators to actively engage both with each other (e.g. *through email, IM (instant messages), video chat, online forums, social media etc.) a*nd with learning materials.[5]

A key aspect of designing for digital education is the blend between use of physical and online space. An online environment enables learners to work at their own pace, and at a time and place convenient to them. Learners can benefit from both passive and active learning so it's important to keep a balance. This balance will vary depending on the subject or skills being taught. Creating activities that build on passive learning tasks provides learners with the opportunity to apply recently acquired knowledge. The table provides some examples of how to progress from passive learning to active learning.[6]

Figure No. 1 Alignment with learning outcomes
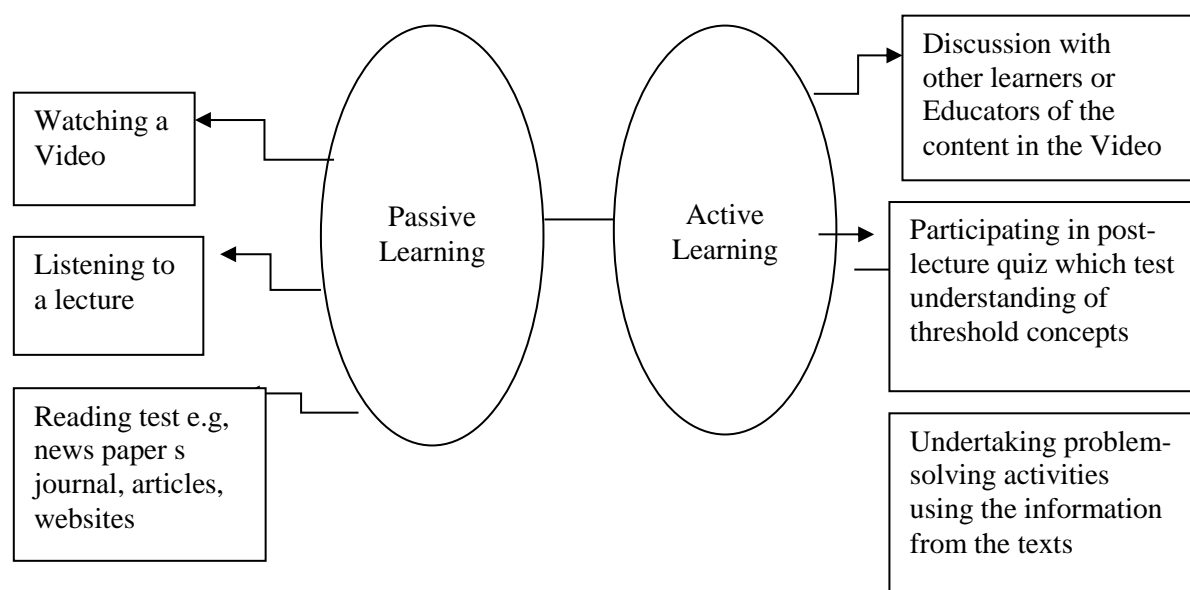
A. .Underlying macro-economic factors:

India is experiencing rapid economic growth, which has led to an increased demand for skilled professionals in various industries. Online education provides a cost-effective and efficient way for individuals to acquire new skills or upgrade their existing ones. This has made online education a popular choice among job seekers and professionals looking to stay competitive in the job market. Additionally, the COVID-19 pandemic has further accelerated the adoption of online education, as traditional educational institutions have had to shift to online learning to ensure continuity of education. Finally the Online Education market in India is experiencing significant growth due to the increasing demand for flexible and accessible educational options, the adoption of technology in education, the young and tech-savvy population, government support, and the need for skilled professionals in a rapidly growing economy. The online education market encompasses user and revenue development across three key segments: (1) Online University Education, (2) Online Learning Platforms, and (3) Professional Certificates. Online University Education includes platforms offering accredited degree programs and courses from universities and colleges (University Platforms), while Online Learning Platforms provide a wide range of courses across various subjects and skill levels (Course Platforms). Professional Certificates encompass platforms offering specialized training and certifications for career advancement and skill development (Certificate Programs)[7].

B. Revenue growth of Online education market in India:

The present revenue in online education is projected to reach US$6.71bn in 2024 and expected to show an annual growth rate (CAGR 2024-2029) of 23.06%, resulting in a projected market volume of US$18.94bn by 2029. The online learning platform market has a projected market volume of US$ 5.50bn in 2024. In the global comparison, most revenue will be generated in the United States (US$87.51bn in 2024). The average revenue per user (ARPU) in the online education market is expected to amount to 309.1 million users by 2029. The user penetration in the online education market

will be at 13.2% in 2024. The below figure-2 indicates the revenue growth of the of the online education market in India.

Figure No. 2 Revenue growth of online education market in India 2017-2029

Source: https://www.statista.com/outlook/emo/online-education/india.
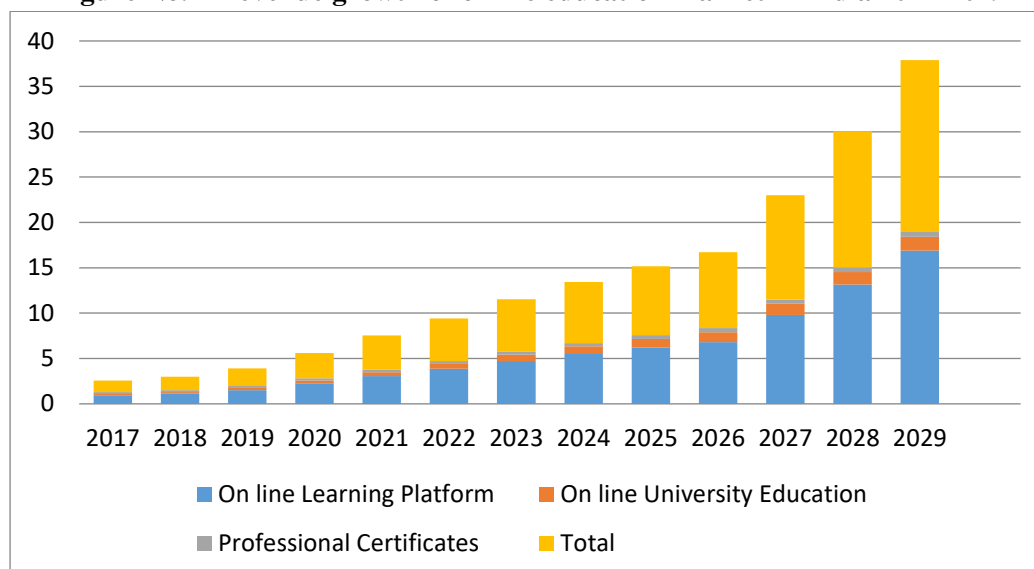
C. Market Size of Online Education in India.

India's online education market is set to grow to USD 1.96 billion and around 9.6 million users by 2021 from USD 1.6 million users in 2016. Reskilling and online certifications are the largest category today, at USD 93 million. Primary and secondary supplemental education will be the largest category by 2021 at USD 773 million, growing at a CAGR of 60%. Test preparations will be the fastest-growing category in 2021, growing at a CAGR of 64%. There are five major categories of education with potential for significant online adoption. The below figure No-3 indicates.

Figure No.3 Market Size of Online Education in India

Source: https://www.statista.com/outlook/emo/online-education/india
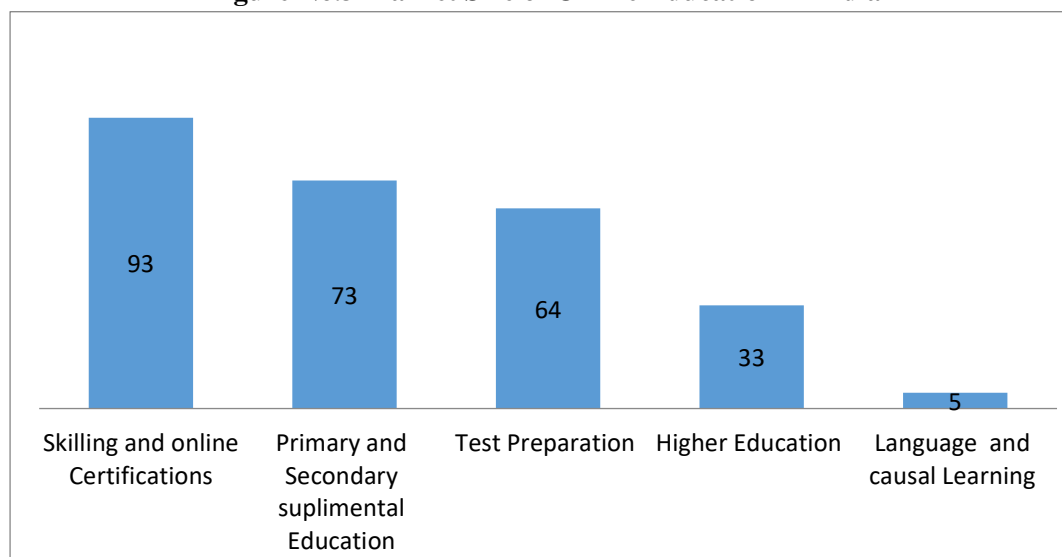
D. WEB BASED SURVEY (During COVID 19 Pandemic)

A web-based survey has been conducted through the set of questionnaires' from the various higher education institutions composed of both students and faculties. The acquired knowledge and technical aspects of online teaching are often difficult to correlate with the quality of the learning experience. A paradigm shift from traditional in-class face-to-face education to online teaching during COVID-19 has determined a lack of availability of internet facilities and technical support. The survey was conducted amongst the students, faculties, parents, and other professionals/general public with different age groups. The totals of 874 responses were recorded; among them, 81.7% are students, 13.8% are faculties, and the remaining is professionals/general public, as shown in.

The survey is composed of a set of questionnaires defined through the brainstorming technique. The questionnaires are framed after conducting the brainstorming sessions carried out with the academic experts (technical, science, management, medical, and so on) heading the institutions/universities in a different role. The collective opinions of all experts confirm that the teacher's delivery and students' understanding capability in online classes could decide the efficacy of the teaching-learning process. In view of the above, questionnaires are framed, and prepared questionnaires are shared on online platforms (*WhatsApp, social media sites, email*) to seek the honest opinion of teachers, students, and the public (who are also the teachers of different backgrounds) by filling out Google Forms. In this regard, responses are collected from the 874 participants through the online mode of the Google Form platform for analysis. In the Google Form, we have provided sufficient space wherein the participants are allowed to express their views, suggestions, and recommendations to improve the quality of the teaching and learning process.

The below figures No. 4 and 5 show that 81.7% of students from various courses have participated in the survey. It is obvious that students are the most affected in this emergency crisis. The survey forms are spread among the student community, irrespective of the degree courses they study. The faculty members composed of different streams responded about their experience of online teaching (content delivery, student response, technology used, software available and so on) and showed their eagerness to know the consolidated summary of the conducted survey. In addition, the survey also incorporated the age group as a prominent questioner to know who the most interested participants are. It is evident that 84.9% of respondents fall between the age groups of 18-26 years (most of them are identified as students) and 11.6% from 27-40 years (faculty members), and the rest were above 41 years (professors, parents, and other professionals) old.

Figure No. 4 Various Stakeholders Participation in the Survey
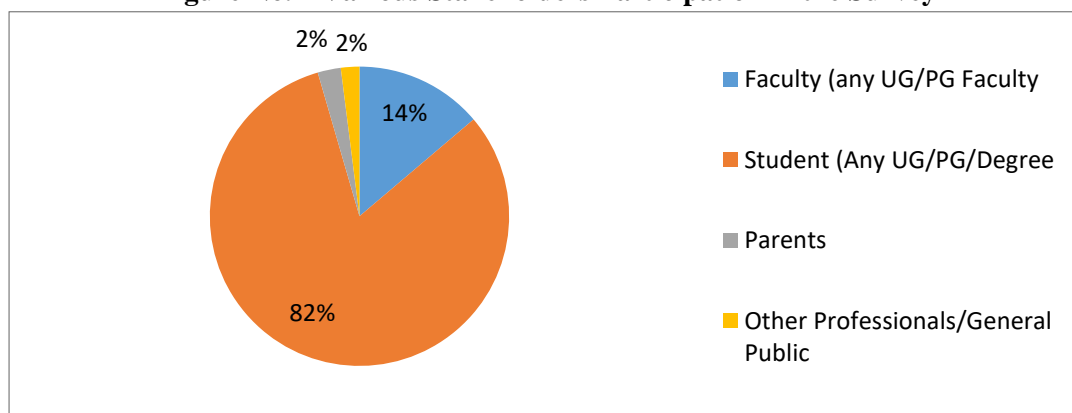
Figure No.5 Age group of Stakeholders participated in the Survey
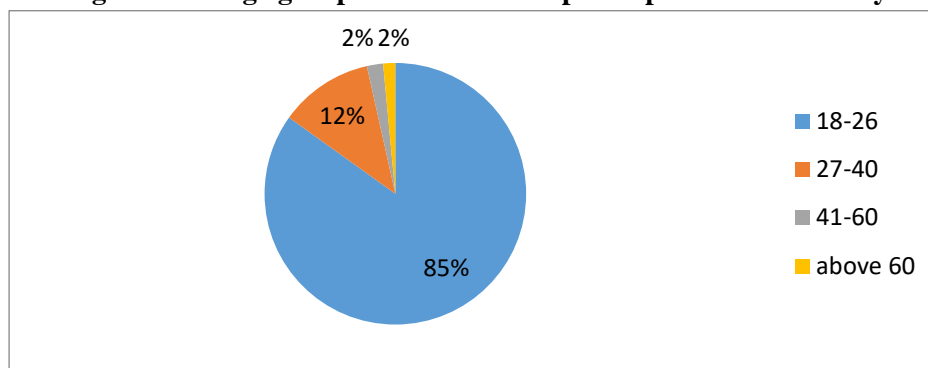
Figure No. 6 details of Age group of Stakeholders for Figure No.4 and 5
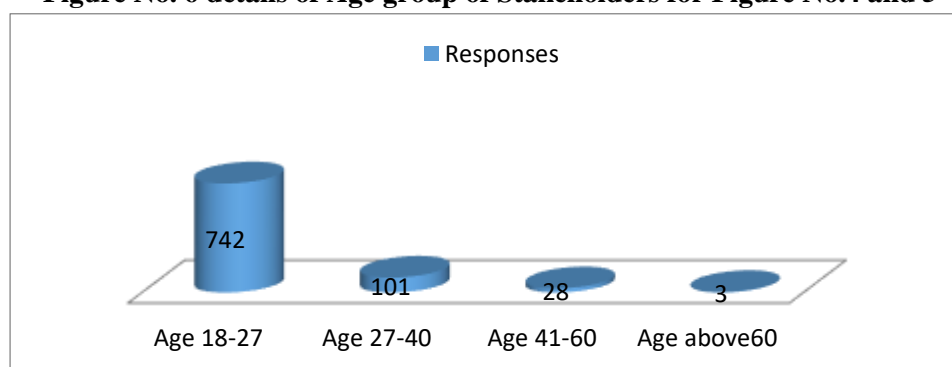
Source: COVID-19 Emergency Lockdown, 2021[8]

E. Demography of Stakeholders Participated in the Survey

In the survey form, a questioner has been framed to understand the efficacy of online teaching for various people due to COVID-19 lockdown at their native place. The respondents were locked down at these various areas, and it was observed that 49.3% are from rural areas, 31.7% are from urban areas, 7.8% are from district headquarters, 6.6% are from taluk headquarters, and around 4.6% are from metropolitan cities. The geographic location of the respondent is of paramount importance to study the accessibility and comfort of technical issues such as internet networks, content delivery methods by faculty members to outreach every student, and possible fruitful discussions as and when the doubts arise are the major issues in the online learning. These new techniques and online studies empower the student to learn whenever and wherever they can, below figure No. 7

Figure No. 7. Demography the Stakeholders participated in the Survey
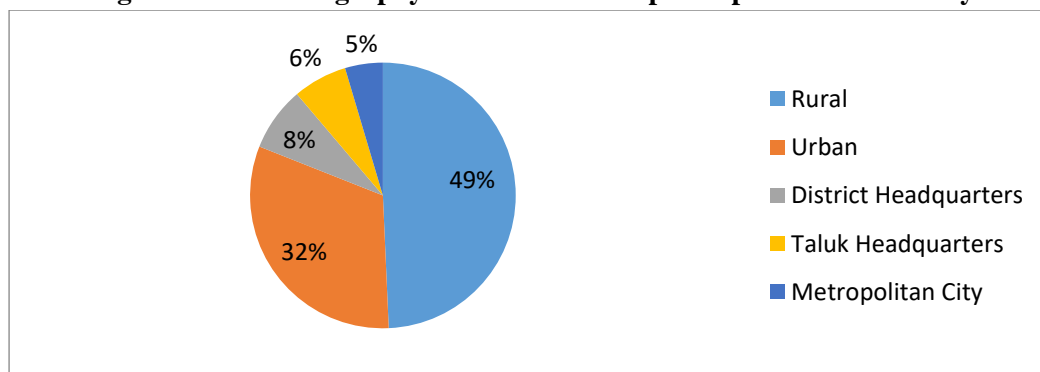
F. Method of Teaching:

Opinions collected from various stakeholders (students/faculties/parents/academicians/other professionals/general public) were collected to know their like lines in traditional in-class face-to-face teaching or online teaching. Interestingly, students have responded that the traditional method of teaching is better than online teaching. **As shown in Figure 8, out** of 874 responses, 754 members (86.3% participants) have responded with their preference given to traditional in-class face-to-face learning. Irrespective of different courses and degree backgrounds, all stakeholders feel that the traditional teaching creates more interest and can clear doubts through interactions. In the traditional method, one-to-one contact and face-to-face communication will happen. Although current generation students are more adapted to advanced technologies, they are still keen to learn through traditional methods. This might be due to a lack of high-speed internet access, limited network data per day, power supply, and technological gadgets (laptops, Android sets, microphones, and so on).

Figure-8 Stakeholders response for mode of students
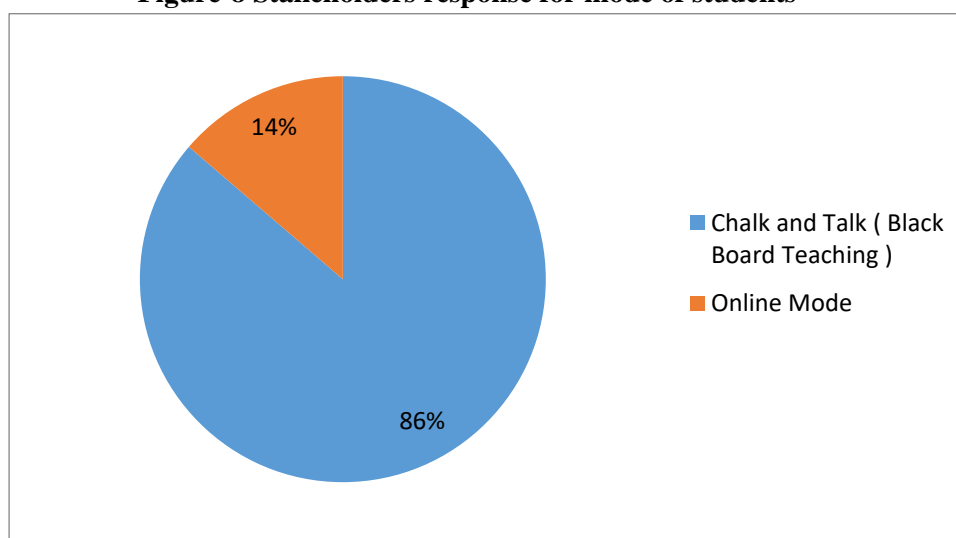
However, 120 members (13.7% of participants) are recommended for online teaching, and approximately 90% of them are from urban areas (Taluk, district, and metropolitan city). It may be predicted that the urban-based participants have sufficient technical tools and facilities.

G. Satisfaction of On-line Teaching:

Opinion is asked to all the participants to give their consent regarding online teaching satisfaction. In online teaching and learning, all the student and faculty participation are equally important. The satisfactory levels (completely satisfied, moderately satisfied and completely not satisfied at all) regarding online teaching is the answer for the question framed. The analysis of 874 respondents showed approximately 70% participants given their consent towards completely not satisfied. Around 25% of the 874 respondents have agreed they are moderately satisfied. The quoted reasons for dissatisfaction with online teaching/learning might be due to lack of technical facilities, power problems in rural areas and so on. Few of them suggested that lack of technical knowledge in usage of online session tools to deliver the contents efficiently. Very few have agreed that they have fully satisfied as shown below.

Figure-9 Participants Satisfaction on online class
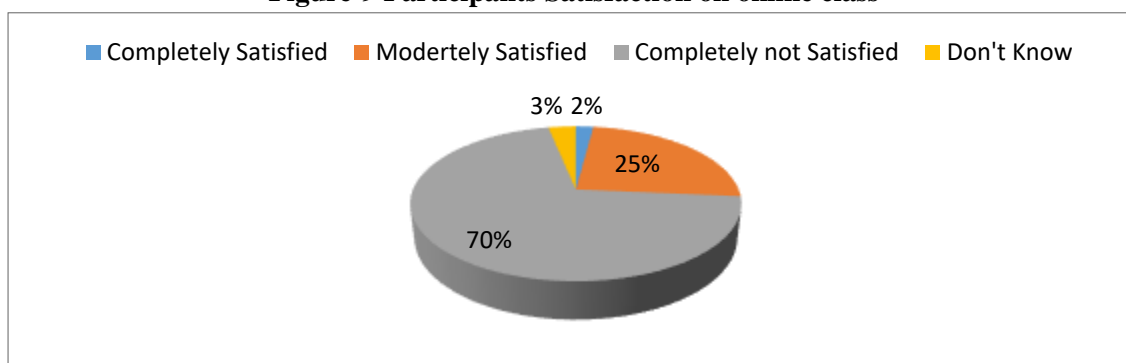
H. **Curiosity of online courses:** As the saying is indicative of this situation of online teaching and learning, curiosity plays a vital role amongst the students and faculties. Curiosity makes subsequent learning rewarding. Its occasional chances to the faculties to make online classes for the students to expedite curiosity, motivate, and make them involved in learning. Everyone experiences different levels of curiosity, depending on their personality, previous experience, background, and a wide range of other factors. In this section, students and faculty were asked about the curiosity of online courses. 72% of the respondents are not curious about online teaching during the lockdown of the COVID-19 pandemic. The results comprise the opinions of both students and faculties. 19.2% of respondents showed they have moderate curiosity. With different degree courses, the same opinion is recorded, and it is proven that the organization of class and methodology adopted may be a reason to answer this question. The results are illustrated in below.

Figure No.10 Curiosity of online courses
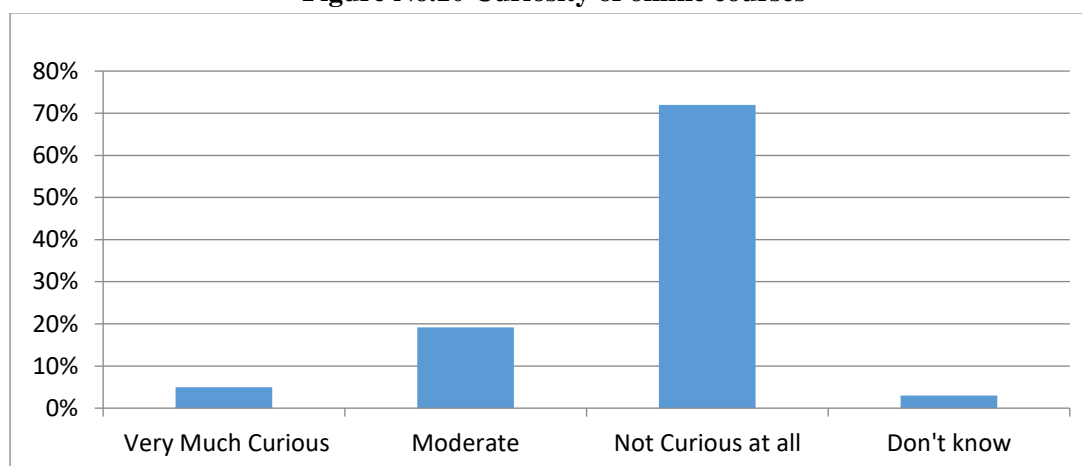
Source from: Web survey from During Covid19 Pandemic

V. Opportunities in online Education in India

Digital learning provided the right environment to the students for learning at any time and everywhere on the basis of their preferences. "Students are very fidgety these days and it is difficult to tame them in classes. Therefore, digital learning formats provide the students the opportunities of learning at their own pace without any pressures from the teachers or the parents", opined one of the experts. Digital learning helps in providing the learning content in a coherent and consistent manner and there is no

restriction as far as the tapping of digital content is concerned. Students are using mobile devices anyway and there are opportunities for the students to refer the mobile devices as per their convenience. Mobile apps are also available for digital learning and there are apps launched by the schools themselves for a particular class. Mobile apps are available across different levels and the teachers club their reading material in dedicated sections.[7] The Government of India has also taken various initiatives to promote online education in the nation. Major initiatives include National Digital Educational Architecture (*NDEAR), PM eVIDYAprogramme, DIKSHA* (Digital Infrastructure for Knowledge Sharing), *SWAYAM* (Study Webs of Active Learning for Young Aspiring Minds) etc.

Opportunities of Online Education: Apart from the various challenges, online education has also a positive and favorable side. Several opportunities of online education are the below Figure No.11 illustrates
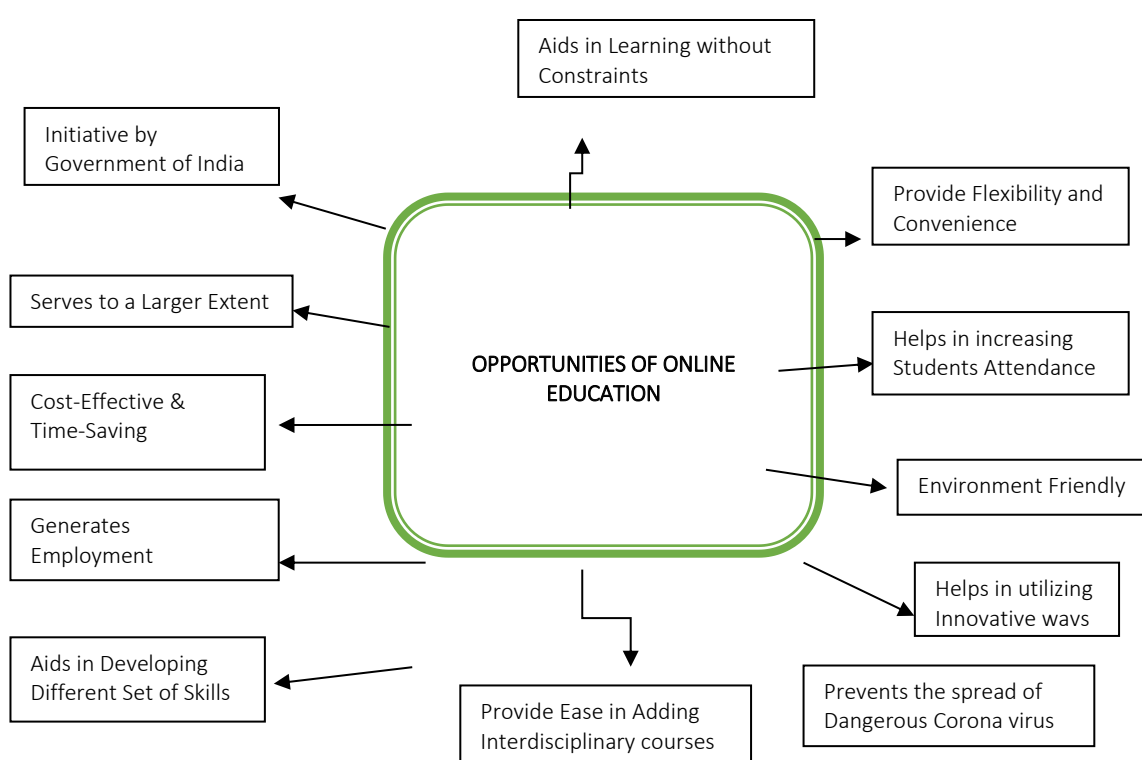
VI. Challenges in online Education

Digital online education in India has several challenges. One of the major challenges is poverty. India has a big population below poverty. Most of the people in India can survive for their daily food or meal for the minimum cost of income. Then it is impossible because most of the parents can't afford a smart phone for their child to take their education through online mode. It is a major imbalance of equal education for all the children. Most of the teachers are not aware to use technology properly. They have no skills or knowledge to prepare a class digitally. Because this revolution was introduced just one and a half years ago. So teachers are perfectly notable for operating this education system.[8] there are various challenges of online education for teachers, students, institutions, government and society at large. These challenges have described below figure No.11.[9]

Distress during Abrupt Transition		Internet Connectivity Issues
Obstacles in Evaluating Students' Progress		Unavailability of Necessary
Data Theft	Challenges of Online Education	Students' Inattentiveness
Physical and Psychological Ailments		Inadequate Technological
		Indiscipline
Troubles in Practicing Time Management		Lack of Motivation
Hardship in Maintaining Work-Life Balance		Lack of Support
		Breakdown in Communication

1. Internet Connectivity

VII. Conclusion:

The paper finally concluded after reviewing literature suggesting that digital education has the potential to revolutionize the entire education sector of the country and transform India into a knowledge economy. On one hand, these issues and challenges each became an aspect of the online regarding proper scheduling of classes, lack of resources, lack of student engagement, lack of basic infrastructure, and on the other, the shift towards online teaching and learning provided the community multiple advantages. Online/digital education can significantly empower the learners of India in terms of personalized instructions as per requirement. There is a positive attitude toward online courses from the Government of India as well, which suggests enhancement measures to be taken to improve the infrastructure for online education. The Government of India needs to evaluate whether the initiatives taken are adequate to support the robust digital ecosystem for education.

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CHALLENGES AND OPPORTUNITIES OF DIGITAL EDUCATION IN INDIA

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Abstract

In the 21st century, a majority of individuals use the internet regularly to increase their knowledge and to foster general awareness in this era of globalization. In every sector we observe an increasing adoption of digital technologies. The education sector has additionally adopted new paradigms for imparting knowledge and skills. It has shifted itself from traditional media to digital classrooms. All educational institutions at primary, secondary and college/ university levels are adopting new pedagogies to cater to this situation and maintain the continuity in providing knowledge to its students. India as a growing nation is continuously seeking to make improvements progressing within the education sector. Just as there are many challenges to the education system of India, the situation provides equally a number of opportunities to overcome those challenges and to form education systems far better education for the Digital learning of the 21st century.

Keywords: Digital, Challenges, Opportunities, Digital Education

Introduction: Digital education means digital learning. It is a type of learning that is supported by digital technology or by instructional practice that makes effective use of digital technology. Digital learning occurs across all learning areas and domains. Digital education gives win-win opportunities for all, at one side School, colleges and other institution finds the rapid rise in enrolments and added revenue because of digital education, and on other side students view this as a flexible and alternate option allowing them to study as per their convenient time and pace. Teachers and professors too find it convenient to prepare their teaching plans aided by digital technology. Teaching and learning become a smoother experience as it includes animations, gamification and audio-visual effects. Over the last few years digital education in India is evolving at faster pace. It is changing the way students learn different concepts and theory in school and colleges. The traditional chalk and talk method in school and colleges has been slowly changing with more interactive teaching methods as schools and colleges are increasingly adopting digital solutions. Digital learning guarantees more participation from students as the current generation of students are well-versed with laptops, I-pads, and smartphones. There are different private players in the field of digital education like Edu comp, Tata Class Edge, Pearson, and Teach Next who are continuously engage and developing different interactive software to help teachers in classroom teaching.

Digital Learning: Digital learning may be a sort of learning combination of context and method by electronic elements. It's associated by technology. It encompasses the appliance of a good spectrum of practices including and virtual learning. Sometimes digital Learning is confused with online learning or e-learning, digital learning encompasses the aforementioned concepts.

Digital learning strategy:
- ❖ Adaptive learning and Blended learning
- ❖ Classroom technologies and E-textbooks
- ❖ Learning analytics and Learning objects
- ❖ Mobile learning: e.g. Mobile Phones, Laptops, Computers, iPads.
- ❖ personalized learning
- ❖ E-learning or online learning and Open educational resources (OER)

Digital learning Pedagogies: Listed below are common pedagogies, or practices of teaching, that combine technology and learning:

- ❖ Blended/hybrid learning
- ❖ Online learning
- ❖ Flipped learning
- ❖ 1:1 learning
- ❖ Differentiated learning
- ❖ Individualized learning
- ❖ Personalized learning
- ❖ Understanding intentionally (UBD)
- ❖ Universal Design for Learning (UDL)

Digital learning tools and resources: There are a plethora of tools and resources online. This will be wont to create and enhance a digital learning environment. Listed below are resources and tools 21st century teachers can use for digital learning:

- ❖ Google class
- ❖ Easy class
- ❖ RSS or Social Readers
- ❖ Google+ Communities
- ❖ YouTube Channels
- ❖ Cloud-based Word Processors (i.e. Google Drive)
- ❖ File-sharing platforms (i.e. Dropbox)
- ❖ Evernote
- ❖ Digital Pocket
- ❖ Zotero

Oppourtunities to Digital Education

1. **Opportunity to Academic Institution:** Academic institution can easily manage their activities with the help of digital education. Some of the important benefits are:
   - Time and money of the Institution will be saved.
   - They can easily plan to conduct online exam and publish the exam results quickly.
   - It makes knowledge to transfer easily and equally from teacher to each and every student with the help of effective and advanced technology-based teaching tools.
   - It helps in creating interest among student which will help them in learning many concepts through interactive- audio-visual teaching contents.
   - Advantages over other schools and colleges which cannot provide such integrated feature-based learning and management system.
   - Easy communication between Institution and parents for student related academic activities.

2. **Opportunity to Students:** As all the study contents will be taught in the classroom through multimedia slides, it creates interest and enthusiasm among the students. Learning will be fun for them. They are able to memorize many concepts through interactive audio-visual teaching contents. Some other benefits to them are:
   - They can easily view their daily time-table, class assignments, any events planned in school etc. from home.
   - They are able to prepare projects and presentation online.

- They can give online exam and view their results.
- They can easily collect teaching contents of missed lecture online.
- They can access library online.

3. **Opportunity to Parents:** In today's world, it is difficult for parents to visit the school or colleges because of their busy work schedule. Digital education helps the parents to view all the information of their ward from comfort of their home or office. Some of the other benefits are:
   - The web facility of digital education helps the parents to view their child's attendance record, progress in syllabus, timetable, etc.
   - They can easily check the subject taught in school, homework given to their ward, any future assignments and projects and guide the ward accordingly to participate and practice.
   - Easily view internal and semester exam schedule and results.
   - They can easily pay the school fees and other activity charges.
   - They can get information on various school events, notices, holidays and can track the presence of ward in the classroom /outside the class.

4. **Opportunity to Teachers:** Digital in education also creates interest among teachers. It helps them to make teaching interaction among students very effectively. Some other benefits are:
   - It helps the teacher to manage their class time and teaching content effectively.
   - They can easily avail the school as well as class related information through web.
   - They can check daily time-table, assignments, teaching history, events and holiday list, self as well as student attendance etc.
   - It will help in explaining the difficult content easily and in effectively.

5. **Opportunity to Principals:**
   Some of the important benefits to principle are:
   - Easy to manage all the school/college activities.
   - In case if the he is on leave, he will be able to access all the school information online and manage the school easily.
   - He can view teachers' teaching progress and students' performance.
   - It will help in allocation of class and subject to a teacher according to his/her interest and experience.
   - He can assign tasks to other staff members and give remarks for their works.

Oppourtunity of Digital Transformation in Education

1. Cooperative learning, Collaboration is forced by digital learning. Teachers can build and handle groups through learning platforms. Co-authors' papers and presentations are made easier by collaborative creative environments such as Google Docs, Twiddla, Edmodo, etc. Such interactive instruments are already used in organizations.

2. Future-focused curriculums allows institution teaches potential curricula, robots, artificial intelligence, automation, science-fiction films. Vast evidence suggests that the workforce needs are changing and continue to expand much in the future, but the organization is not prepared to completely educate them. It won't take years to create and upgrade the curriculum changes. More access to appropriate and frequently updated content is available to students. The ability to quickly upgrade and function requires daily access to new material and functionality.

3. Enhance cooperation between parents and teachers Research indicates that children do better at school and are much healthier in general when parents participate in the academic success of their children. Automation supplies progress notes and reports to parents electronically and advises them to take part in their ward's progress. Imagine if the software would provide an efficient career guide solution by recommending career choices based on calculated metrics, based on student strengths and weaknesses.

4. Tracking of student results One impact of digital transformation on education is that it provides a more realistic way of monitoring the success of students. In recording the information in the work of students, technology can play an important role that lets teachers and parents track their development. For example, manuals or creative work may be compared at intervals to material that is already digitally recorded, which leads to a clearer understanding of who is better and who needs attention.

5. Improved results with data analytics Schools may use analytics to monitor and enhance results. The teacher can better understand what individual student requires by reviewing the information gained by the use of technology in the teaching room. The more clearly you can understand how a student missed a term, the easier the course can be taken. Technology will help us diagnose these shortcomings much more easily and reliably.

Challenges of the Digital Transformation in Education

1. Unequal Access Considering the costs associated with modern technology, not every student could possibly afford it. This is why, if overall digital transformation is to succeed, then classes need to provide students with all the necessary tools and materials in a universal manner. Conversely, teachers do not necessarily have to implement education transformation on the individual-student-level, but rather can limit it to front-ofclassroom tools.

2. System-based compatibility in the world of today, most companies and organizations depend on systems and infrastructures that are technologically oriented, ensuring a smooth and successful operation every day. A major problem with digital transformation in education systems is not compliant with modern digital technologies to advance them. This © 2021 JETIR September 2021, Volume 8, Issue 9 www.jetir.org (ISSN-2349-5162) JETIR2109507 Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org f45 incompatibility means that a current integration system must be upgraded, customized or replaced, which inevitably requires time and resources.

3. Reticence to change In India, almost 70% of those employed in the public sector believe that their digital skills fall behind the private sector. Despite this, several main policymakers reject the next major steps towards digital maturity. In essence, people prefer to get acquainted with what they do and reject to move out of their comfort zone which leads to slow growth and development. Many in education sector fear of failure and are hesitant to learn new skills or processes if they adjust to new technology, culture or mentality.

4. Inferior knowledge or skills an adequate level of trust, expertise and skills is important for driving innovation in the organization. Education institutions must compete to reach a small pool of talent, or follow new approaches for upgrading emerging players through cloud infrastructure in order to ensure a smooth and efficient digital conversion.

5. Data reliability in this digitally rich age, numerous measurements provide insights into future learners, internal efficiencies, user experiences and much more from schools, universities, and trainers. In short, it is an invaluable level of detail. The problem is that these data are smooth, sometimes inaccurate and unreliable, particularly in the education sector. Educational leaders should make educated forecasts, integrated business decisions and take new educational measures to understand the most useful and informative data, in order to be able to receive flowing, prompt, accurate and structured data.

6. Lack of strategy One of the key challenges to progress today is to know where to proceed with digital transformation in any sector or industry. Because the prospect of mass change can be overwhelming, it can be difficult to understand which path to take or how to build a solid strategy.

Major Government Initiatives

1. New Education Policy: National Education Policy, 2020 aims at making India a global knowledge superpower by introducing several changes from the school to college level in the Indian education system with special emphasis on digital education.

2. Digital Infrastructure for Knowledge Sharing (DIKSHA) platform: DIKSHA is the national platform for school education available for all states and the central government for grades 1 to 12 and was launched in September 2017. As part of Prime Minister eVidya announced under the Athmanirbhar Bharat Programme, DIKSHA is the 'one nation, one digital platform' for school education in India.

3. Swayam Prabha TV Channel: To support and reach those who do not have access to the internet.

4. Online Massive Open Online Course (MOOC): MOOC courses relating to National Institute of Open Schooling (from grades 9 to 12 of open schooling) are uploaded on SWAYAM portal; around 92 courses have started and 1.5 Crore students are enrolled.

5. On Air: Shiksha Vani, Digitally Accessible Information System (DAISY) by National Institute of Open Schooling for differently abled students, e-Path, Shala, Radio broadcasting is being used for children in remote areas who are not able to join online.

Opportunities in Education and Digital Learning:

Digital learning has plenty of advantages for teachers, students and administrates. Teaching and learning can take place whenever and wherever it is most convenient for everyone. Education in teaching and learning process changing Digital mode. Colleges and universities change may be a curriculum digital mode. Allow us to mention a number of Suggestions for improving education as Digital learning.

❖ **Develop high-quality digital learning programs:** High-quality learning programs useful to teachers, students, and administrators. digital learning mode helpful to all those. These programs easy to understand different pedagogies and methods to teachers.

❖ **Teachers' skills development:** Digital learning useful to teachers develops professional skills and easy to understanding content for students. Digital classroom: Every college and institute maintains their won Digital class. The Digital class manages to difficult time to beat the overall classroom. Offering a spread of subject knowledge.

❖ **Online Class:** Very few colleges and universities were doing online classes. Absolutely nothing with online education pre-COVID-19 the education getting to back. Planning and understand

that online education getting to minimum knowledge source for brand spanking new revenues. The web class mostly full fills to academic activities.

- ❖ **ICT teaching:** ICT related teaching and learning process very effective and straightforward process. numerous ICT tools useful to love., radio, T.V, Computer Etc.., access to realize more knowledge. Present days we using Face book, what's up, Google classroom, easy class, etc.…. Useful to share information and communication technology. Providing Internet facility: In rural areas suffering internet facility. Therefore, the government tacks response to supply good connections in an online facility. It's useful to country students' good online classes covered.
- ❖ **Financing:** Digital education involves effective and efficient. Therefore, the government provides funding to develop digital classroom.

Conclusion: Online education can change the whole future scenario in education if it can be implemented in joint collaboration with industry, universities and government Digital education helps to improve the education condition of a country. Now ICT has become essential part of teaching learning process. ow digitalization technology is the inherent part of our life. The main vision of digital education is can't breakdown the flow and Budhia and Behera; Asian J. Educ. Soc. Stud., vol. 45, no. 3, pp. 1-7, 2023; Article no. AJESS.100746 7 continuation of education in any condition. It is a good step for engaged students in teachinglearning process in this COVID-19 pandemic scenario also. Digital classrooms, online classes, ICT tools are developing education to give better opportunities.

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ROLE OF DIGITAL LITERACY IN EDUCATIONAL SETUP AT 21ST CENTURY

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Abstract

Digital literacy represents the ability to use information and communications technologies safely and critically for work, both on a personal as well as on social level. The main features of this 21st century literacy are the using of computers for the purpose of finding, evaluating, creating, displaying and sharing information over the Internet. Acquiring knowledge and skills in the field of ICT is one of the prerequisites for successful social inclusion in contemporary society and the labour market in urban India, while the digital literacy is one of the necessary competences of a modern Indian in urban as well as rural societies. Therefore, in order to achieve quality education, these two concepts have become part of the framework of the national educational system.

The concepts of Info-Tech application and digital literacy in the educational process have led to a change and upgrades in the role of teachers and pupils, as well as the resources used in the teaching and nature of teacher instruction. Starting from the acquisition of digital literacy to aligning the curriculum with technology, the teacher's tasks are numerous in order to make changes, including their knowledge and skills related to the use of technology, as well as understanding the relationship between technology, methods and content.

Keywords: ICT, digital literacy, technology, education, teachers, competences.

Introduction: Digital revolution and rapid development in ICT have made digital literacy the main concern in this age of modern digital education. Accordingly many schools and educational institutions have redesigned the curriculum and several others are expected to follow the suit.In order to bring about long lasting effective changes at the classroom level, it is important that the teachers follow a regimen of constant training. As a teacher plays an integral role in education, improvement in their knowledge and skills is imminent to develop their digital literacy in order to use new methods in the classroom. The main aim of this paper is to point out the general concept of digital literacy, the role it plays in today's education, the challenges for modern teachers in the digital era who need to master new digital skills and introduce new methods using technology.

Concept of Digital Literacy: Literacy means reading and writing skills. **'Digital'** is an elaborate topic, but in short, it is something that deals with modern digital technology. Digital Literacy is about being able to make sense of digital media. This occurs through meaningful and sustainable consumption and curation patterns that improve an individual's potential to contribute to an authentic community. This includes the ability to analyse, prioritize, and act upon the countless digital media 21st century citizens encounter on a daily basis. In fact, digital literacy is different from computer literacy. It requires critical thinking skills, an awareness of the necessary standards of behaviour expected in online environments, and an understanding of the shared social issues created by digital technologies. Or alternatively: digital literacy = digital tool knowledge + critical thinking + social engagement. According to the American Library Association's task force, "Digital literacy is the ability to use information and communication

technologies to find, evaluate, create, and communicate information, requiring both cognitive and technical skills." Digital literacy means to live, learn and work in a digital society. A digitally literate person should possess both digital skills and knowledge to use computer networks, engage in an online community, and understand the societal issues which are raised by digital technologies.

Principles of Digital Literacy:

☐ **Access:** The ability to obtain digital tools, platforms, and the internet is foundational. Individuals must know how to access devices and networks to engage with digital content.

☐ **Critical Thinking:** Evaluating information critically is crucial. Users should assess the credibility of sources, recognize biases, and differentiate between fact and opinion.

☐ **Communication**: Effective digital communication involves understanding various online platforms and their etiquette, as well as being able to express ideas clearly and appropriately in digital formats.

☐ **Collaboration:** Working effectively with others in digital spaces is important. This includes using tools for group projects, understanding virtual teamwork dynamics, and sharing resources responsibly.

☐ **Creativity**: Digital literacy encourages creativity in content creation. This includes producing original digital media, using design tools, and leveraging technology for innovative problem-solving.

☐ **Safety and Ethics**: Understanding online safety, privacy, and ethical behavior is essential. This principle covers issues such as cybersecurity, respecting intellectual property, and practicing digital citizenship.

☐ **Information Management**: Individuals should be able to search for, organize, and manage digital information effectively. This includes using search engines, maintaining digital files, and managing data responsibly.

☐ **Adaptability:** The digital landscape is constantly evolving. Being adaptable means staying informed about new technologies and being willing to learn and adjust to changes.

☐ **Problem-Solving**: Digital literacy includes the ability to troubleshoot and solve problems that arise with technology. This involves critical thinking and resourcefulness when facing digital challenges.

☐ **Lifelong Learning**: Embracing continuous learning is key in a digital world. This principle encourages individuals to seek out new knowledge and skills related to technology throughout **their lives.**

Importance of Digital Literacy for Teachers:

Enhancing Teaching Methods: Digital tools can enrich lesson plans, making them more engaging and interactive. Teachers proficient in technology can integrate multimedia resources, simulations, and online platforms to enhance student learning.

Preparing Students for the Future: Educators need to model digital literacy skills that students will require in their future careers. By demonstrating effective use of technology, teachers help students become competent digital citizens.

Access to Resources: Digital literacy allows teachers to find and utilize a wide range of educational resources, from research articles to lesson plans and instructional videos, improving their teaching effectiveness.

Fostering Collaboration: Familiarity with digital tools facilitates collaboration among teachers, students, and parents. Platforms like Google Classroom and educational apps enable communication and project sharing, fostering a collaborative learning environment.

Adapting to Diverse Learning Needs: Digital literacy equips teachers to adapt their teaching strategies to meet diverse learning needs through differentiated instruction and personalized learning experiences.

Staying Updated: The educational landscape is constantly evolving. Digital literacy helps teachers stay current with new tools, trends, and best practices, ensuring their teaching remains relevant and effective.

Assessment and Feedback: Technology offers various tools for assessment, enabling teachers to provide timely and constructive feedback. Digital literacy helps educators utilize these tools effectively to track student progress.

Promoting Critical Thinking: Teaching students how to evaluate online information and sources fosters critical thinking skills, which are essential in today's information-rich world.

Creating a Safe Digital Environment: Understanding digital literacy also includes knowledge of online safety and ethics, allowing teachers to guide students in navigating the digital world responsibly.

Professional Development: Engaging with technology for personal growth encourages continuous learning among educators, opening opportunities for professional development and networking.

Researches related to the teachers digital literacy

Impact on Student Learning: Studies often focus on how teachers' digital literacy influences student engagement, motivation, and achievement. For example, research shows that when teachers effectively integrate technology, students tend to perform better academically.

Teacher Preparation Programs: Investigations into teacher education programs highlight the necessity of incorporating digital literacy training. Research indicates that pre-service teachers often feel underprepared for using technology effectively in their classrooms.

Professional Development: Many studies explore the effectiveness of professional development initiatives aimed at enhancing teachers' digital literacy. Findings suggest that ongoing training, particularly collaborative and hands-on approaches, leads to improved technology integration.

Digital Divide: Research examines the disparities in digital literacy among teachers, often linked to socio-economic factors, geographic location, and institutional resources. This work highlights the need for targeted support in underserved areas.

Pedagogical Approaches: Studies focus on how teachers' digital literacy shapes their pedagogical strategies. Research often emphasizes the role of technology in facilitating inquiry-based and student-centered learning.

Technology Acceptance: The Technology Acceptance Model (TAM) has been used to study teachers' attitudes towards technology. Research typically investigates factors influencing teachers' willingness to adopt new technologies.

Digital Citizenship: Research examines how teachers' digital literacy affects their ability to teach digital citizenship skills, preparing students to navigate the digital world responsibly.

Assessment Practices: Studies explore how teachers use digital tools for formative and summative assessments. Research indicates that tech-savvy teachers are more likely to employ diverse assessment strategies.

Collaborative Learning: Investigations into how digital literacy fosters collaboration among educators show that tech-enabled professional learning communities enhance sharing of best practices and resources.

Longitudinal Studies: Some research tracks changes in teachers' digital literacy over time, assessing the long-term impacts of training and technological integration on teaching practices.

These research areas provide valuable insights into the importance of digital literacy for teachers and its broader implications for education.

The status of digital literacy in India

Government Programs: The Indian government has launched initiatives like Digital India, aiming to promote digital literacy among citizens, especially in rural areas. Programs such as the Pradhan Mantri Gramin Digital Saksharta Abhiyan (PMGDISHA) aim to provide digital literacy training to millions.

Increased Internet Access: Internet penetration has grown dramatically, with over 600 million internet users in India. This increase has made digital tools more accessible, especially among younger populations.

Mobile Penetration: The widespread use of smartphones has facilitated access to digital content and services, contributing to greater digital engagement across demographics.

Educational Institutions: Many schools and colleges are integrating technology into their curricula, promoting digital literacy among students and teachers.

Challenges:

Digital Divide: There are significant disparities in digital literacy based on geography, socio-economic status, and education levels. Rural areas often lag behind urban centres in both access to technology and digital skills.

Quality of Training: While numerous training programs exist, the quality and effectiveness of these initiatives can vary widely. Many programs lack adequate infrastructure and skilled trainers.

Awareness and Adoption: Despite growing access, some populations remain unaware of the benefits of digital literacy, leading to uneven adoption rates, particularly among older adults and marginalized **communities.**

Infrastructure Issues: Inadequate internet infrastructure in remote and rural areas hampers the ability to engage with digital platforms effectively.

Content Localization: There's a need for more localized content in regional languages to make digital literacy training accessible to diverse populations.

Future Directions

Focus on Skill Development: Emphasizing vocational training and skill development in digital technologies can prepare the workforce for future job markets.

Public-Private Partnerships: Collaborations between government, NGOs, and private sectors can enhance digital literacy initiatives, providing resources and expertise.

Inclusive Approaches: Targeting marginalized communities, women, and the elderly with tailored programs can help bridge the digital divide.

Emphasis on Critical Skills: Beyond basic digital literacy, there is a growing need to teach critical thinking and digital citizenship to navigate the online world responsibly.

Conclusion: Imparting education online is not new. The world is undergoing rapid change, and for almost a decade, digitalization of all sectors is being emphasized. The education sector was also revamped in the light of thenewfound knowledge and has been a boon to many. All schools must work in this way, and now NCERT has introduced a digital safety curriculum for schools. Soon, we will see our digitally literate teachers building the pathway towards a digitally educated India whohave full knowledge of digital etiquettes and are responsible digital citizens. However, India still has to improve over existing infrastructure. We should not lose hope, and help our brethrenas we all are part of this great nation. A smart blend of online and offline teaching can help in bridging the digital divide. With the growing use of smartphones by all categories of people, mobile based learning can also help in

serving as a tool to provide digital literacy. Moreover, modern-day youth is aware that digital literacy places them in a better position to earn a job.

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EFFECTIVENESS OF THE PROJECT-BASED LEARNING APPROACH AS A WAY TO ACTIVE PARTICIPATION OF STUDENTS IN LEARNING

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Abstract

Project-Based Learning (PBL) is a transformative method of learning from teacher centered approach to student centered approach. It emphasizes the learning through active participation of students in the classroom. In this method, students work in groups through various projects which poster them to think critically, creatively and collaboratively. Project- based learning leads an individual not only mastery the subject but also leads to explore different skills like problem solving skills, communication skills, time management skills…etc. Research shows that PBL can lead to improved retention of information and greater student motivation. It is a powerful tool in modern education, where students get hands on experience of learning. Educator can fulfil the needs of 21st century students through this method.

Keywords: PBL (Project-based learning), active participation, critical thinking, creativity

Introduction

"Education is manifestation of divine perfection that is already in man" by- Swamy Vivekananda. According to this quote Swamy Vivekananda explained that knowledge is inherent in man. Knowledge is always inside; it does not come from outside.

According to above words each individual has their own potential to explore new things to lead the situations in their life. As a classroom teacher we should provide a healthy learning environment to explore effective learning in the classroom. To provide such environment different approaches plays important role in teaching-learning process such one approach is Project based learning approach. (PBL)

In 21st Century, Project Based Learning (PBL) is an innovative approach in Teaching learning process. According to the needs of 21st century students, teachers should modify or change their teaching process from teacher centered to student centered, where students needs and interest are given importance. For this transformation, we can bring student centered approach PBL to our classroom. Project Based Learning (PBL) is an approach where student get hands on experience by active participation in group with their peer group which makes learning effective. Project Based Learning (PBL) fosters abstract, intellectual tasks to explore complex issues in classroom.

Meaning: Project Based Learning (PBL) is a student -centered approach, that involves students working in a group to explore the solutions for real world or relevant problems or question by thinking critically.

Definition: "Project Based Learning (PBL) is teaching method in which students gain knowledge and skills by working for an extended period of time to investigate and respond to an authentic, engaging and complex question, problem, or challenge."- (PBL Works)

"A systematic teaching method that engages students in learning essential knowledge and life enhancing skills through an extended, student influenced inquiry process structured around complex, authentic questions and carefully designed products and tasks".

(Project based learning online, Buck institute)

Importance of Project Based Learning (PBL)

Project Based Learning (PBL) is an important approach as it makes students to develop their skills which are necessary to overcome from day today tasks.

- **Student-Centered:** Project Based Learning (PBL) is a student- centered approach where students are given more importance.
- **Active learning:** Project Based Learning (PBL) makes a student to learn actively by engaging in their group.
- **Real world relevance:** Students work on real world relevance topics it may related to issues of their communities, state, country…etc.
- **Collaboration and communication:** It allows the students to work in groups which enhances their skill of collaboration and communication which are very necessary to 21st students.
- **Development of Critical Thinking:** It makes the students to think beyond their ability or capability.
- **Develops Problem Solving skills:** Project based learning (PBL) allows student to solve their problem themselves.
- **Lif long learning:** It promotes students to continue their learning throughout their lives.
- **Deeper understanding:** Students develop a deeper understanding of any topic assign to them.
- **Creativity:** It fosters creativity among students.

Components of Project Based Learning (PBL) according to PBL WORKS

- **Challenging problem or question:** PBL approach is always based on meaningful problem to be solved or question to be answered.
- **Sustained Inquiry:** A good quality project requires students to think critically about the problem or question.
- **Authenticity:** An authentic project involves real world context, addresses 21st century skills and speaks relevant concern and interest of the student.
- **Student Voice and Choice:** PBL allows student to express their ideas and to take right decision in particular situation.
- **Reflection:** A well-designed project includes structured time for reflection.
- **Critique and Revision:** PBL encourages students to give, receive and improve their project.
- **Public Product:** Finally, students make their work public by sharing, explaining, or presenting a project to audience outside the classroom.

Steps of Project Based Learning (PBL)

Project Based Learning (PBL) approach that involves students in active participation. The steps of PBL includes,

- **Formulating learning objective:** Defining what students are expected to learn.
- **Understand concepts:** Students understand and learn a concept assign to them.
- **Train skills:** Students are trained for necessary skills required to the project.
- **Design a project theme:** Students choose a theme for their project.
- **Create a project proposal:** Students create a comprehensive proposal of their project.
- **Execute project tasks:** Students complete the tasks of their project by working in a group.
- **Present project report:** Students present a report on their project.
- **Evaluation:** Use evaluation practices to enhance their learning.

Conclusion: Project Based Learning (PBL) plays an important role in teaching learning process. It is an innovative approach which enhances the different skills of an individual like problem solving, critical thinking, time management, collaborative, communication..etc which are very much necessary in 21st century. As a classroom teacher we should encourage our students to explore learning through PBL approach which provides hands on experience of real-world issues around them. As it is a student-centered approach students have a complete freedom of learning or have complete autonomy to present their project as creative as possible which makes a learner to explore things in depth. Finally, we can conclude that learning through PBL will retain for long period of time, which makes teaching learning process as more meaningful and effective.

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CHALLENGES AND OPPORTUNITIES IN DIGITAL EDUCATION

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Abstract

Since digital education offers greater accessibility, flexibility, and personalized learning experiences, it has completely changed the landscape of traditional education. It also carries along a host of challenges, such as the digital divide, inadequate preparation for educators, difficulties with scholar engagement, and data privacy. The main potentials and difficulties in digital education are examined in this paper. Prospects include more people getting access to high-quality education irrespective of where they live, the possibility of using AI and data analytics to customize education, global collaboration, and cost-effectiveness. By balancing innovation with inclusion, digital education can transform the learning landscape and provide opportunities for learners worldwide.

Keywords*: Digital education, digital divide, teacher training, AI in education, virtual learning, data privacy.*

Introduction: The arrival of new digital technology has transformed various facets of our lives, including education. Digital education, encircling online learning offers abundant of opportunities to improve teaching and learning experiences. Nevertheless, it also presents important challenges that need to be addressed for its effective implementation. The escalation of digital technology has steered into a new era of education, offering extraordinary opportunities for learning and growth. Digital education, surrounding online courses, e-learning platforms, and blended learning models, has the potential to transform the way we learn and teach. However, it is not without its challenges, and its impact on education is a complex and multi-layered issue. One of the most important advantages of digital education is its convenience. Online courses can be retrieved from anywhere with an internet connection, making them particularly beneficial for students who live in remote areas or have mobility limitations. Furthermore, digital education offers flexibility, allowing students to learn at their own pace and on their schedule. This can be particularly helpful for working experts or students with family commitments. Another benefit of digital education is its possibility for personalization. Technology can be used to adapt instruction to individual students' needs and learning styles. Adaptive learning stages, for example, can adjust the pace and content of a course based on a student's performance. This can help to ensure that students are not falling behind or getting bored. However, digital education is not without its disadvantages. One of the most noteworthy challenges is the potential for separation. Online learning can be a private experience, and students may miss the social interaction and support that they receive in a traditional classroom. Furthermore, the lack of face-to-face contact can make it difficult for students to build relationships with their teachers and age groups. Another challenge is the eminence of online courses. Not all online courses are created equal, and some may lack depth, relevance, or educational reliability. Students need to be careful when selecting online courses and should consider factors such as the reputation of the institution offering the course and the qualifications of the instructor.

Opportunities in Digital Education

1. Availability and Elasticity

One of the most important returns of digital education is its ability to break geographical barriers. Students from rural or underserved areas, who may not have access to high-quality educational institutions, can benefit from online courses offered by top universities and training platforms. This flexibility allows learners to engage in education without being constrained by time or location.

The advent of digital technology has redesigned the landscape of education, offering new avenues for learning and teaching. Digital education, encompassing online courses, e-learning platforms, and

blended learning models, presents numerous opportunities to enhance educational experiences. However, it also comes with significant challenges that must be addressed for its successful implementation. Digital education platforms such as Coursera, edX, and Khan Academy have democratized access to information, providing courses on a wide range of subjects that cater to different learning levels. Students can learn at their own pace and access materials as often as necessary, allowing for personalized learning paths that are custom-made to individual needs.

2. Personalized Learning: The amalgamation of Artificial Intelligence (AI) and data analytics in education has enabled the creation of personalized learning experiences. AI can examine student performance and engagement metrics to provide custom-made feedback and recommend learning materials suited to their abilities. Platforms like DreamBox and Knewton use adaptive learning technologies to adjust the difficulty of content based on real-time student performance, ensuring that students are neither overcome nor bored. Personalized learning enhances student engagement and improves retention rates by addressing individual learning styles and paces. This is particularly beneficial for students with special needs, as digital tools can provide accommodations such as speech-to-text, visual aids, or interactive exercises designed to meet diverse learning needs.

3. Collaboration and Global Exposure: Digital education fosters collaborative learning through virtual classrooms, discussion forums, and online group projects. Students can interact with peers from different cultural and educational backgrounds, fostering a global perspective. Collaborative tools like Google Workspace, Microsoft Teams, and Zoom have enabled students and teachers to maintain engagement and communication, even in remote settings. For higher education and research, online platforms provide opportunities for scholars to collaborate on international research projects, share resources, and attend virtual conferences without the need for travel. This increased global connectivity enriches the learning experience and prepares students for a workforce that is increasingly global and digital.

4. Cost Efficiency: Digital education reduces many of the logistical costs associated with traditional education, such as commuting, physical infrastructure, and printed materials. Free or low-cost online courses provide an affordable alternative to conventional education, allowing students from low-income backgrounds to gain skills and qualifications that improve their employability.

Additionally, open educational resources (OER) like textbooks, video lectures, and academic papers are readily available online, reducing the financial burden on students. For institutions, digital platforms can optimize operational costs, making education more sustainable in the long term.

Challenges in Digital Education

1. Digital Divide and Inequality: Despite its potential to democratize education, digital education exacerbates existing inequalities due to the digital divide. Many students, particularly in developing countries, lack access to reliable internet connections, digital devices, or even electricity. A 2020 report by UNESCO highlighted that nearly 50% of the world's population lacks access to the internet, limiting the reach of digital education. The digital divide not only affects access but also the quality of learning. Students with limited access to technology may struggle to participate fully in online classes, which creates disparities in learning outcomes. Governments and educational institutions must invest in digital infrastructure and provide support to marginalized communities to address this gap.

2. Lack of Teacher Training and Preparedness: The rapid transition to digital education during the COVID-19 pandemic revealed a significant gap in teacher preparedness. Many educators were not equipped with the digital literacy skills required to effectively navigate online platforms or employ

digital tools for instruction. According to a 2021 OECD report, less than 60% of teachers felt prepared to use digital technologies in their teaching before the pandemic. In addition to technical skills, teachers must be trained in pedagogical strategies that are suitable for online learning. Simply replicating traditional classroom methods in a virtual environment may not be effective. Continuous professional development and training programs that focus on digital pedagogy are essential for improving teaching outcomes in digital education.

3. Engagement and Attention Issues: One of the primary challenges of digital education is maintaining student engagement. The lack of a physical classroom environment can make it difficult for students to stay focused, leading to distractions and reduced participation. Younger students, in particular, may struggle to remain attentive during prolonged online lessons.

In addition, the lack of face-to-face interaction with teachers and peers can result in feelings of isolation, which negatively impacts learning. Digital platforms must incorporate interactive features, such as quizzes, live discussions, and gamification, to keep students motivated and engaged. Blended learning models, which combine online and in-person elements, may also be more effective in sustaining student engagement.

4. Lack of Face-to-Face Interaction: While digital platforms enable global connections, they may limit face-to-face interactions, which are crucial for building relationships, fostering collaboration, and providing personalized support. For instance, a student struggling with a concept may find it difficult to get immediate help from a teacher in an online environment.

5. Security and Privacy Concerns: The increased reliance on digital platforms for education has raised concerns about data security and privacy. Many online learning platforms collect vast amounts of personal data, including student performance metrics, communication logs, and personal information. This data is often stored in cloud-based systems, making it vulnerable to cyberattacks and breaches.

Educational institutions must implement robust data protection measures, including encryption, secure authentication, and compliance with privacy regulations such as the General Data Protection Regulation (GDPR). Furthermore, teachers and students need to be educated on best practices for online security to protect themselves from phishing attacks, identity theft, and other online threats.

6. Quality Assurance: Ensuring the quality of online courses and instructional materials is a challenge. Curating reliable content and maintaining high standards can be difficult in the vast digital landscape. For example, there are many online courses available, but not all of them are created equal. Some may lack depth, relevance, or pedagogical soundness.

7. Student Motivation and Engagement: Keeping students motivated and engaged in online learning can be more challenging than in traditional classrooms. Lack of social interaction and the potential for distractions can affect student focus and participation. For example, students may find it difficult to stay focused during a long online lecture without opportunities for interaction or breaks.

Addressing the Challenges: To fully realize the potential of digital education, it is essential to address the challenges it presents. Some strategies include:

Bridging the Digital Divide: Investing in infrastructure and providing affordable internet access to underserved communities.

Improving Technological Infrastructure: Ensuring reliable and high-quality technology in educational settings.

Blending Online and In-Person Learning: Combining online and traditional classroom instruction to leverage the strengths of both approaches.

Developing Quality Assurance Frameworks: Establishing standards and guidelines for online course development and evaluation.

Promoting Student Engagement: Incorporating interactive elements, providing opportunities for social interaction, and offering personalized support.

Pedagogical Innovations

- **Flipped Classroom:** This approach involves students watching lectures or learning materials outside of class and using class time for discussion, problem-solving, and hands-on activities.
- **Gamification:** Incorporating game-like elements into learning can increase student engagement and motivation.
- **Microlearning:** Breaking down learning into small, digestible chunks can make it more manageable and effective.

Ethical Considerations

- **Privacy and Data Security:** Protecting student data and ensuring privacy is crucial in digital education.
- **Digital Citizenship:** Teaching students about responsible use of technology and online behavior is essential.
- **Accessibility:** Ensuring that digital education materials and platforms are accessible to students with disabilities.

The Future of Digital Education: Balancing Innovation and Inclusion: The future of digital education will likely be shaped by a combination of technological advancements and efforts to address existing challenges. Innovations such as Virtual Reality (VR) and Augmented Reality (AR) hold the potential to revolutionize digital education by providing immersive learning experiences. For instance, students can conduct virtual science experiments or explore historical sites through VR simulations, making learning more engaging and interactive. Moreover, AI-driven tools will continue to enhance personalized learning, with predictive analytics helping educators identify at-risk students and intervene early to provide support. These technologies, when combined with human-centric pedagogy, can create a more inclusive and responsive educational environment. However, for digital education to achieve its full potential, governments, educational institutions, and tech companies must collaborate to bridge the digital divide and ensure that all students, regardless of their socio-economic status, have access to quality education. Investing in digital infrastructure, teacher training, and student support systems will be crucial in creating an equitable future for education.

Future Trends

- **Artificial Intelligence (AI):** AI can personalize learning, provide intelligent tutoring, and automate administrative tasks.
- **Virtual and Augmented Reality (VR/AR):** These technologies can offer immersive and interactive learning experiences.
- **Blockchain Technology:** Blockchain can be used to verify credentials, ensure data security, and facilitate micropayments.

Case Studies and Best Practices

- **Successful Implementations:** Examining case studies of schools or institutions that have effectively implemented digital education can provide valuable insights.
- **Best Practices:** Identifying and sharing best practices in digital education can help others learn from successful approaches.

Case Study 1: Khan Academy

Overview: Khan Academy is a non-profit organization that offers free, world-class education for anyone, anywhere. It provides a vast library of videos, exercises, and articles covering a wide range of subjects.

Key Features:

- **Personalized Learning:** Khan Academy's adaptive learning technology adjusts the pace and content of lessons based on student performance.
- **Gamification:** The platform incorporates elements of game design, such as points, badges, and leaderboards, to motivate students.
- **Accessibility:** Khan Academy's content is available in multiple languages and is accessible to students with disabilities.

Impact: Khan Academy has been widely praised for its ability to improve student outcomes, particularly in math and science. It has also been used by teachers as a supplemental resource to enhance their instruction.

Case Study 2: Massachusetts Institute of Technology (MIT) OpenCourseWare

Overview: MIT OpenCourseWare (OCW) is a free online initiative that makes the full course materials from MIT's undergraduate and graduate courses available to the world.

Key Features:

- **Comprehensive Course Materials:** OCW includes lecture notes, assignments, exams, and other course materials.
- **Global Reach:** OCW has been used by students from all over the world, providing access to high-quality education regardless of geographic location.
- **Flexibility:** Students can learn at their own pace and choose the courses that interest them.

Impact: OCW has been instrumental in democratizing access to higher education and has inspired other universities to make their course materials freely available online.

Conclusion: Digital education offers significant opportunities for increasing accessibility, flexibility, and personalization in learning. However, it also presents challenges related to inequality, teacher preparedness, student engagement, and data privacy. As education continues to shift towards digital formats, addressing these challenges will require a coordinated effort from policymakers, educators, and technology developers. Finally, digital education can exacerbate existing inequalities. The digital divide, and the disparity in access to digital technology, can hinder students from participating in online learning. This can perpetuate educational inequalities, as students from disadvantaged backgrounds may be at a disadvantage compared to their peers.

In conclusion, digital education is a double-edged sword. It offers significant opportunities for learning and growth, but it also comes with challenges. To fully realize the potential of digital education, it is essential to address these challenges and ensure that digital education is accessible, equitable, and high-quality.

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INNOVATIVE APPROACHES IN TEACHER EDUCATION

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Abstract

Education plays a vital role in the advancement and empowerment of nations in contemporary society. It influences an individual's character and equips them for the challenges of modern existence.The teacher education system serves as a crucial mechanism for elevating the standards of school education. By revitalizing and strengthening this system, there is potential for substantial improvements in the overall quality of education nationwide. In recent years, the education system has undergone significant changes, leading to the emergence of various teaching methodologies for children. Nevertheless, numerous educators remain unacquainted with these contemporary approaches. Delivering a high standard of education necessitates the adoption of innovative strategies and a range of teaching techniques. Fundamentally, education should encompass the dissemination of knowledge. An educator strives to convey information as they perceive it. While traditional and conservative teaching methods can assist educators in achieving their objectives, modern and creative techniques facilitate holistic development. The integration of new methodologies within educational institutions has the potential to enhance the quality of education and empower individuals.

Keywords: Innovative, Pedagogical Approaches, Teacher Education.

Introduction: The teacher education system serves as a crucial mechanism for enhancing the quality of education in schools. By revitalizing and strengthening this system, there is potential for significant improvements in educational standards nationwide. Several pressing issues necessitate immediate attention for effective enhancement. One critical aspect is the quality of the teacher education program, particularly the imperative for creativity within the curriculum. Innovativeness involves the capacity to think beyond conventional boundaries and create something unique. Progress cannot occur without innovation. It is essential for teachers to cultivate their creativity, and this development should commence at their training institutions. Historically, teacher education has been perceived as lacking in rigor compared to other higher education programs, characterized by insufficient standards and weak professional networks. Education is universally acknowledged as a fundamental human right. Individuals with access to education can enhance their skills, capabilities, and confidence, thereby empowering them to advocate for additional rights. Consequently, the right to education serves as a crucial instrument that amplifies the voices of individuals. As noted by Swami Vivekananda, "Education is the expression of excellence already in human beings." In essence, education is the most significant catalyst for both change and transformation within communities, and the implementation of innovative teaching and learning practices is essential for advancing our educational methodologies. The challenges faced by the community largely stem from the Hospitality and Tourism educational institutions, which must be exceptionally creative in their approach. These institutions are tasked with imparting new skills while also fostering fresh perspectives and solutions to the challenges encountered in teaching and learning. Students in Hospitality and Tourism must be equipped to navigate the complexities of the industrial revolution of the twenty-first century. The Teacher Education System in India encompasses approximately 3,000 institutions dedicated to the training of educators. This system is essential to support a burgeoning educational framework that comprises 638,738 primary schools (grades I to V) and 206,269 upper primary schools (grades VI to VIII), employing 32.2 million teachers

and serving 157 million students. The escalating need for qualified teachers has led to significant expansion within the teacher education sector (GOI, 2003). In India, these institutions can be categorized as government-aided, private, or unassisted, with additional establishments operated by universities. Training for teachers in primary and elementary education is primarily conducted at Teachers' Training Institutes (TTIs) and District Institutes of Education and Training (DIETs), with many states depending on DIETs as their main source for elementary educators. The governance of teacher education falls under the jurisdiction of state governments. The academic programs and curricular policies of these institutions are regulated by State Boards or Directorates, leading to the issuance of Certificates or Diplomas. The State Councils of Educational Research and Training (SCERTs) and the National Council of Educational Research and Training (NCERT) at the national level act as the main support entities. The Centrally Sponsored Scheme of Teacher Education was launched in the academic year 1987-88 and comprised several components:

(i) the establishment of District Institutes of Education and Training (DIETs) through
the enhancement of existing Elementary Teacher Education Institutions (ETEIs) and
the creation of new DIETs as necessary;

(ii) the upgrading of selected Secondary Teacher Education Institutions (STEIs) into:
Colleges of Teacher Education (CTEs) and (b) Institutes of Advanced Study in Education (IASEs)

(iii) the fortification of the State Council of Educational Research and Training. The Scheme for Teacher Education underwent amendments in 2003, with the updated regulations being released in January 2004.

The main goals of the Teacher Education Scheme are outlined as follows:

(i) To ensure the prompt completion of sanctioned projects related to DIET, CTE,
IASE, and SCERT.

(ii) To make the sanctioned DIETs and IASEs, along with the strengthened
SCERTs, fully operational throughout the IX Plan period.

(iii) To appropriately authorize and execute new programs for DIET, CTE, IASE,
and SCERT.

(iv) To enhance the quality of DIET programs, particularly those aimed at both preservice and in-service training. It is essential for teacher education to invigorate the initiative of educators, sustain it, and, most critically, optimize the time and energy of both teachers and students. The Education Commission (1964-66) emphasized the importance of a sound curriculum. Professional development for educators is essential for enhancing the overall quality of education. Allocating resources towards teacher training can lead to substantial educational improvements for countless students, even with limited financial investment. Walker (1967) emphasized in 'World Trends in Education' that the primary aim of teacher education is to cultivate proficient educators. A competent teacher effectively addresses the fundamental needs of individuals in various social contexts. Smith, in 'Teachers for the Real World' (1969), asserted that to adequately prepare students for a changing world, an effective teacher must possess a keen understanding of real-world dynamics. The International Encyclopaedia provides insights into the professional educational status of teachers. The Committee on Teaching and Teacher Education (1987) asserted that to attain the same social status and respect as those who significantly contribute to society, contemporary and future educators must be recognized as professionals. Their educational programs and qualifications should increasingly align with those of medical practitioners.

The main functions and objectives of teacher education are the following:

(a) Better understanding of the student,

(b) Building confidence,

(c) Methodology of teaching,

(d) Building a favourable attitude,

(e) Familiarizing with the latest in education,

(f) Familiarizing with school organization,

(g) Creating social insight,

(h) Improving standards and

(i) Training for democracy.

Education and training of teacher educators has to focus its attention on the changing role of teacher educators according to the emerging global trends in education and the overall needs and aspirations of the people in India. It has also to deal with specific problems confronting teacher education institutions and make teacher education more responsible and responsive. It also has to encourage teacher educators' continuing professional growth. The rationale behind the education and professional training of teacher educators lies in providing qualitative instruction through well-designed programmes of professional education.

Importance of Quality Education: India's education system ranks among the largest and most varied globally. The Trends of privatization, significant expansion, increased autonomy, and the introduction of initiatives in emerging sectors have collectively broadened access to higher education. However, these developments have also raised substantial concerns regarding the quality and relevance of higher education. In response to these challenges, the National Policy on Education (NPE, 1986) and the Programme of Action (PoA, 1992) were formulated, outlining strategic goals for educational policies and advocating for the creation of an independent national certification authority. Recognizing the critical importance of educational quality, the Government of India established the National Assessment and Accreditation Council (NAAC) in 1994 as an autonomous body under the University Grants Commission. NAAC's vision emphasizes the integration of quality assurance into the operations of Higher Education Institutions (HEIs). The role of the teacher remains central in the intricate educational landscape worldwide.

Curriculum Framework for Quality Teacher Education (1996) has set the following objectives for teacher educator training programme: □ To develop competencies and skills needed for preparation of teachers and teacher educators.

❖ □ To enable them to organize competency-based and commitmentoriented professional programmes.

❖ To enable them to develop pedagogy relevant to the education of teacher educators.

❖ To acquire an understanding of the needs and problems of teacher educators and teacher education institutions.

❖ . To develop skills related to management of teacher education institutions.

❖ To develop competencies of curriculum development and preparation of learning and evaluation materials.

❖ To enable teacher educators to acquire capabilities to organize inservice continuing education programmes.

❖ To enable them to organize need based and commitment-oriented on the job training.

❖   To develop competencies for evaluating educational programmes and teaching learning materials
     ☐

❖   To develop the capacity of examination, analysis, interpretation, elaboration and communication of educational ideas ☐

❖   To relate education and the national needs and develop critical awareness about Indian realities ☐

❖   To enable them to understand the relationship between Indian ethos, modern technology and education ☐

❖   To promote the global perspective of educational development with special reference to the developing countries.

Challenges in Teacher Education in the 21st Century: In numerous countries globally, the significance of teacher education has notably increased over recent decades. The World Assembly of the International Council on Education for Teaching (ICET), held in London in July 1972, conducted a comprehensive examination of the challenges and advancements in teacher education. Over the past few decades,

India has experienced several innovative developments in this field. Among the most significant are:

(j) The establishment of four Regional Colleges of Education in Ajmer, Bhopal, Bhubaneswar, and Mysore in 1963, which adopted an interdisciplinary approach to teacher education under the auspices of the National Council of Educational Research and Training (NCERT).

(ii) The initiation of Summer-cum-Correspondence courses for the Bachelor of Education degree in 1966, aimed at addressing the backlog of untrained teachers in these Regional Colleges.

(iii) The formation of the University Grants Commission's Committee on Teacher Education in New Delhi, the establishment of state Boards of Teacher Education in various states, and ultimately, the creation of the National Council for Teacher Education in 1973.

Major challenges for initial teacher education in the twenty-first century include:

1. The raising of the status of the teaching profession to a level at which it attracts the best qualified applicants.

2. Harnessing rapidly developing technology to provide maximum learning opportunities for student teachers, especially those in remote areas and those in developing countries, where conventional resources such as libraries are impossible to resource adequately.

3. Discovering the optimum balance between theory and practice in the curriculum of teacher education in the many and varying contexts in which it is provided.

4. Developing teacher education structures and curricula that provide optimal balances among the academic, humanitarian, aesthetic, and moral domains of human experience.

5. Designing research that takes account of the many complex factors impinge upon the process of teacher education, so that a greater understanding may be gained of the ways in which students learn to teach in the myriad of contexts in which they live.

Innovative teaching methods are crucial in enhancing decision-making abilities, judgment, and empowerment among students.

a) Enhance student engagement by utilizing creative teaching strategies that cultivate self-assurance and inquisitiveness.

b) Promote autonomous learning: Creative methodologies can ignite students' interest and drive for independent study.

c)   Develop problem-solving skills: Innovative educational practices equip students with the ability to tackle challenges and seek solutions effectively.

d)   Foster reflective thinking: Novel techniques encourage both students and educators to engage in reflective thought processes.

e)   Increase reflective thinking- Innovative approaches promote reflective thinking in both learners and teachers, assisting them in reasoning and decision making.

f)   Interactive Classroom- Innovative teaching techniques make the classroom more engaging.If the classroom is participatory, pupils will learn more effectively.

Innovative Approaches to Education: The integration of technology has emerged as a crucial asset in the educational landscape. Computer-based tools possess the capability to enhance access to information and improve learning outcomes. Technology can facilitate the creation of effective learning environments by incorporating real-world challenges into the classroom setting. It expands learning opportunities through various mediums such as films, demonstrations, simulations, and online resources. Students can receive feedback from software tutors, educators, and peers, allowing them to reflect on their learning processes and navigate progressive changes that enhance their understanding and reasoning skills. In light of technological advancements, higher education institutions are now required to address new demands. They face challenges stemming from shifting demographics, rising student expectations, limited teaching resources, government regulations, and intensified competition. The advent of technology-enabled learning has ushered in a plethora of opportunities. By employing suitable strategies, advanced instructional tools, and a robust technical framework, institutions can leverage this transformative shift in higher education. A variety of innovative teaching strategies can be implemented to enrich the learning environment:

The incorporation of technology into teaching and learning, demonstrating a comprehensive understanding of subject matter, and the ability to cater to a diverse student body. This includes fostering open and responsive learning environments and utilizing creative teaching methods such as web-based course materials, electronic presentations, Google Classrooms, blended learning, virtual laboratories, free online courses, project-based learning (PBL), and STEM initiatives in collaboration with community partners. Engaging in purposeful play and providing opportunities for student-centered constructionism, such as administering and submitting tests, quizzes, assignments, and surveys, can significantly enhance the educational experience. Even basic mail-based communication tools can play a vital role in strengthening faculty-student relationships and promoting student collaboration.

Conclusion: Programme planning, transaction, and evaluation techniques are all examples of educational technology. Contemporary students necessitate novel strategies to obtain both theoretical and practical knowledge, thereby preparing them with the essential skills to navigate life's challenges. Educational institutions, including schools, colleges, and universities, ought to adopt inventive pedagogical methods. This research seeks to advocate for creative teaching techniques that enhance the quality of education. The approaches outlined in this study may not be universally applicable to every educational setting or teaching context. Teacher educators necessitate comprehensive training across various domains related to recent advancements. The challenges identified are significant, and there is an urgent need for solutions. Organizations such as NCTE, SCERT/SIE, and university education departments must promptly implement innovative strategies within the educational framework. There is no cause for discouragement, as the Indian education system is continually evolving. It is advisable to test these methods and adapt them according to specific circumstances, implementing necessary

modifications. The objective of this work is to deepen the understanding of teaching methodologies and their potential for practical application.

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INNOVATIVE TEACHING METHODS IN THE CLASSROOM

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Abstract

Advance pedagogy is the way to improve teaching and learning performance. Dissimilar innovative teaching methods are now in use across the world. Hybrid teaching includes e - learning in adding together to the face to face teaching. Use of elegant gadgets for dissimilar tasks like teaching, designing question papers, evaluation of student, feedback and research methodology is discussed. The application of innovative teaching and learning methods is critical if we are to inspire and engender a strength of learning as well as enthusiasm on the part of students, the role of education is to make certain that while academic staffs do teach, what is taught should also be understandable to students emanating from culturally and linguistically varied backgrounds and that they rapidly become familiar with the predictable standards. Lecturers should thus be appropriate themselves to utilizing innovative methods so that the students' learning process is as free-flowing as probable and that the methodology they adopt is favorable to learning. The major purpose of this paper aims to understand the different innovative teaching methods applying in the classroom.

Keywords: Innovation, gamification, blended learning, and inquiry based learning

Introduction: Today's learners are digital natives. They grow up with digital technologies. Teachers have to solve significant issues related to the version of the learning process towards students who have dissimilar learning styles and new necessities for teaching and learning. The two educational models experienced across the globe are face to face learning and hybrid learning the conventional method of teaching and learning is synchronous and characteristically involves the employment of a classroom where educators and students interrelate within time and space. This model of education is called synchronous. The asynchronous or hybrid teaching has some advantages such as it inspires the learning process. It offers time flexibility for part time job or other task holders. It reduces overfull classrooms. The hybrid teaching model students viewpoint is that they can interact improved with the faculty and classmates remain engaged. Compute skill and technical skills of students enlarged. The efficiency of in-class activity increases and it encourages out-of-class learning also.

Characteristics of Innovative Teaching Strategies

➢ *Student-Centric -* Innovative teaching strategies prioritize the requirements and engagement of students, nurturing active contribution in the learning process.

➢ *Active Learning -* Encourages hands-on and participatory behavior, moving away from inactive learning to promote deeper sympathetic and retention.

➢ *Flexibility and adaptableness -* Adapts to the varied learning styles and requirements of students, offering flexibility in contented delivery and new schooling methods.

➢ *Technology incorporation -* Utilizes technology imaginatively to improve effective learning experiences, incorporating digital tools and resources for effectual and interactive teaching.

➢ *Two-way (Collaborative) Learning -* Emphasizes collection work, teamwork, and peer learning to improve social and communication skills amongst students.

➢ *Problem-Solving Emphasis -* Focuses on mounting critical thinking skills and problem-solving skills, demanding students to apply knowledge in real-world scenarios.

➢ ***Creativity support -*** Cultivates a learning atmosphere that stimulates creativity and novelty, allowing students to articulate themselves and explore novel ideas.

➢ ***Individualized Learning Paths -*** Recognizes and accommodates the varied learning preferences and paces of individual students, promoting modified learning experiences.

➢ ***Feedback-Oriented method -*** Prioritizes positive feedback to guide students' development, facilitating a nonstop cycle of improvement and indication.

➢ ***Farming of Soft Skills -*** Integrates the progress of soft skills, such as communication, teamwork, and time management, necessary for success in a variety of contexts.

Innovative Teaching Methods for Enhanced Student Engagement

There are variety of innovative teaching methods are there in the present universal, but in this paper some of very important innovating teaching methods were discussed with examples.

1. Interactive teaching

Interactive teaching engage innovation methods in teaching that actively engage students in the learning process. Instead of inactively receiving information, students contribute in activities, discussions, and exercises that necessitate their input and participation. This approach aims to promote a more lively and engaging classroom environment. Interactive instruction can take a variety of forms, including group deliberations, hands-on activities, simulations, case studies, and mutual projects.

Example:

Imagine a biology session where students use a practical dissecting table. Through a touch-sensitive screen, students can virtually cut apart a frog. They can pull and drop tools, zoom in for a closer look, and take delivery of real-time feedback on their technique. This interactive method engages students actively in the learning process, making it more memorable and pleasurable.

2. Practical Reality Technology

Practical Reality technology creates a simulated environment that users can interrelate with, providing an exclusive and immersive learning experience. In education, practical actuality can be used to communicate students to virtual worlds that replicate historical events, scientific phenomena.

Example:

Students studying history might practically explore ancient civilizations, while science students could behavior virtual experiments in an engaging learning environment. This technology enhances empirical learning, allowing students to envisage abstract concepts and engage with subject matter in an innovative way of teaching.

3. Artificial Intelligence in Education

AI in education involves the incorporation of AI technologies to enhance the learning practice for students and sustain educators. AI can be applied in a range of ways, such as:

a) Modified learning
b) Automated evaluation
c) Adaptive learning platforms
d) Practical assistants
e) Data scrutiny

Integrating AI into education aims to make learning more competent, modified, and adaptive to the requirements of each student, eventually enhancing the on the whole educational experience.

Example:

An Artificial Intelligence powered adaptive learning platform can be employed in mathematics. If a student struggles with an exact concept, the AI provides supplementary exercises and resources to strengthen understanding. On the other hand, if a student excels, the AI advances them to supplementary challenging material, ensuring modified and efficient learning experiences.

4. Blended Learning

BL is an instructive approach that combines conventional face-to-face instruction with online learning mechanism. It seeks to influence the strengths of both in-person and digital learning to create supplementary flexible and modified learning strategies and experience.

Example:

A history class might have students be there traditional lectures and participate in classroom discussions. Additionally, the teacher could put together online modules featuring interactive timelines, practical tours of historical sites, and mutual research projects. Students might use online discussion forums to split their insights and connect with peers beyond the physical classroom.

5. 3D Printing

3D printing, also known as preservative developed, involves creating physical objects layer by layer based on a digital model. In education, 3D printing is utilized to carry concepts to life in a touchable and illustration way. Teachers and students can design and print three-dimensional models that represent scientific structures, mathematical concepts, or prototypes.

Example:

In a science class studying the solar system, students could use 3D printing to generate exact models of planets, moons, and other outer space bodies. By designing and printing these objects, students not only increase a deeper understanding of the spatial relationships within the solar system but also expand skills in design and technology. The tangible experience of holding and examining 3D-printed models can considerably enhance the learning process and make complex topics supplementary accessible.

6. Project-based Learning (PBL)

PBL is an instructional methodology that centers on students completing projects that require them to relate their knowledge and skills to real-world challenges. PBL emphasizes hands-on, mutual learning, fostering critical thinking and problem-solving skills.

Example:

In a biology class, students could connect in a PBL project focused on environmental conservation. The project might engage researching local ecosystems, identifying ecological issues, proposing solutions, and implementing a society awareness campaign.

7. Inquiry-based Learning (IBL)

IBL is an approach where students actively discover and examine topics, posing questions and conducting research to construct their understanding. This method encourages interest, critical thinking, and a deeper engagement with the subject substance.

Example:

In a physics class, students discover the principles of motion. They might invent questions about the factors affecting the velocity of an object and design experiments to test their hypotheses. Through hands-on examination and data analysis, students would develop a theoretical understanding of physics principles while honing their research and logical skills.

8. Jigsaw

The Jigsaw technique is a supportive learning strategy where students work collaboratively to become experts on exact topics and then share their acquaintance with their peers. This promotes cooperation, communication, and an intelligence of shared liability for active learning method.

Example:

In a history class studying an exacting time period, each student could be assigned to become a "specialist" on a diverse aspect, such as political, economic, social, or cultural basics of that era. After researching and becoming well-informed in their area, students would then form new groups with members who have proficiency in different aspects. In these new groups, students share their acquaintance, creating a complete understanding of the historical period through collaborative/shared learning.

9. Cloud Computing Teaching (CCT)

CCT involves leveraging cloud-based technologies to improve the learning experience. This includes storing and accessing data; collaborating projects; and utilizing online tools; resources for teaching and learning.

Example:

In an IT class, students might use cloud computing platforms to work together on coding projects. They could use cloud-based progress environments to write and test code, store project files on cloud storage, and team up in real-time using cloud-based collaboration tools. This approach allows for faultless collaboration, easy access to resources, and the suppleness to work on projects from different locations, promoting a more modern and connected learning practice.

10. Flipped Classroom

The flipped classroom model reverses the conventional teaching approach by delivering instructional content, such as lectures, through digital media outside of the classroom. Class time is then used for interactive behavior, discussions, and application of acquaintance.

Example:

In a math class, as a substitute of the teacher delivering a lecture on a new concept during class time, students might look at a pre-recorded video lecture at home. Class time would then be enthusiastic to working on math problems, appealing in group discussions, and getting personalized assistance from the teacher. This allows students to learn at their own pace receive supplementary individualized support, and actively apply what they've educated in a shared setting.

11. Peer Teaching

Peer teaching involves students taking on the role of the teacher to make clear concepts or assist their classmates in understanding exact topics. This approach reinforces considerate through teaching and encourages teamwork.

Example:

In a language class, students could couple up to put into practice conversational skills. Each pair is accountable for teaching and correcting each other's pronunciation, grammar, and vocabulary practice. This not only provides supplementary practice for the students but also promotes a helpful learning community where students take a lively role in each other's learning.

12. Peer Feedback

Peer feedback involves students providing positive feedback to their peers on their work, presentations. This encourages an ethnicity of collaboration, communication, and continuous enhancement.

Example:

In a writing class, students could switch over drafts of their essays with a peer. The peers would then give feedback on the structure, clearness, and overall efficiency of the writing. This process not only helps students pick up their writing skills but also enhances their capability to critically assess and provide positive feedback.

13. Crossover Teaching

Crossover teaching involves teachers from different subjects collaborating to incorporate content from multiple disciplines. This interdisciplinary approach aims to show the interconnectedness of dissimilar subjects and improve the relevance of learning.

Example:

In a high school setting, a history teacher and a literature teacher might work together on a unit exploring a specific historical period. Students could read prose from that era, analyze historical credentials, and discuss the cultural and social background. This crossover teaching method helps students see how knowledge from diverse subjects can complement and supplement their understanding of a exacting topic.

14. Gamification

Gamification integrates game elements into non-game contexts, such as education, to improve engagement and motivation. Points, levels, challenges, and rewards are used to make learning more pleasurable.

Example:

In a language learning app, students receive points for completing lessons, quizzes, and interactive exercises. As they mount up points, they unlock new levels and earn practical rewards. This gamified learning approach incentivizes reliable learning, provides an intelligence of achievement, and makes the language learning process more pleasurable.

15. Problem-Based Learning (PBL)

PBL is an instructional strategy where students learn through solving real-world problems. It promotes critical thinking, collaboration, and the application of knowledge to realistic situations.

Example:

In a physics class, designing a sustainable energy solution for a group of people, Working in groups, students would require to research, analyze, and suggest a solution that considers the principles of physics, environmental collision, and cost-effectiveness. This method not only deepens their sympathetic of physics but also develops problem-solving skills in a realistic context.

Implementing Innovative Teaching Methods

Implementing pioneering teaching strategies can be a transformative understanding for both teachers and students. Here are some tips to assist make easy the successful integration of innovating teaching strategies in the classroom:

- *Begin with Clear Objectives* - Evidently define the learning objectives and you want to attain with the innovation teaching strategy. Make certain that the selected strategy aligns with the curriculum and educational outcomes.

- *Create a helpful Environment* **-** Promote a optimistic and supportive classroom culture that encourages experimentation, creativity, and risk-taking. Set up an ambiance where students feel happy exploring new concepts and expressing their thoughts.
- *Provide sufficient Resources* **-** Make certain that teachers and students have right to use to the necessary resources, including technology, materials, and training materials. Sufficient resources facilitate a smooth completion of innovating teaching methods.
- *Encourages teamwork* **-** Encourage collaboration among teachers by creating opportunities for sharing insights, experiences, and best practices. Mutual environments promote a culture of nonstop development and innovation.
- *Look for Student Feedback* **-** Frequently gather feedback from students to understand their experiences with the innovative teaching methods. This input helps teachers make essential adjustments and tailor the strategies to enhanced suit student requirements.
- *Rejoice Successes* **-** Recognize and celebrate the successes achieved through the completion of innovative teaching methods. Recognizing achievements reinforces the worth of experimentation and encourages an optimistic attitude towards innovation.
- *Stay Informed and efficient* **-** Stay informed about rising education trends, technologies, and pedagogical methods. Nonstop learning and staying updated make certain that educators remain at the front position of innovative teaching practices.
- *Suppleness and adaptableness* **-** Be flexible and willing to become accustomed. Dissimilar strategies may work for diverse students or in varying contexts. Suppleness allows for adjustments based on ongoing assessments and feedback.
- *Support nonstop Professional Development* **-** Support ongoing professional progress for teachers, including attending workshops, conferences. Nonstop learning ensures that teachers stay enthused and well-equipped to implement innovative strategy in teaching efficiently.

Keep in mind that the victorious implementation of innovative teaching strategies requires a mixture of planning, collaboration, and a pledge to ongoing development.

Conclusion

Any teaching method without destroying the objective could be measured as innovative methods of teaching. Innovation in teaching approaches is an efficient approach to make positive change in students' behavior and attitude towards learning, to pick up their motivation and engagement. The results of the change have two-sided nature – they can influence students' results and understanding of the educational content and create conditions for a successful learning process. Innovative teaching strategies will lead to a learning society in which the creative and academic abilities of students will allow them to meet the goals of revolution and development.

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PREDICTORS OF OCCUPATIONAL STRESS AMONG TEACHER EDUCATORS: INSIGHTS FROM EMOTIONAL INTELLIGENCE, ROLE CONFLICT AND MENTAL HEALTH

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Abstract

This study investigates the interconnections between Emotional Intelligence (EI), Role Conflict, Mental Health, and Occupational Stress among teacher educators affiliated with Kuvempu and Davanagere Universities in Karnataka, India. Employing a descriptive survey design, data were collected from 180 teacher educators to analyze how EI, Role Conflict, and Mental Health serve as predictors of Occupational Stress. Utilizing multiple linear regression analysis, findings reveal that these predictors account for approximately 49.8% of the variance in Occupational Stress, with Role Conflict emerging as the most significant contributor (28.35%), followed by Emotional Intelligence (15.9%) and Mental Health (5.54%). This research underscores the pivotal role of Emotional Intelligence in mitigating stress and emphasizes the need for targeted interventions to alleviate Role Conflict. Additionally, it highlights the importance of mental health in supporting educators' resilience. The implications suggest that educational institutions should implement emotional intelligence training programs, clarify roles, and offer mental health resources to foster a healthier work environment. This study not only contributes to the understanding of occupational stress in education but also provides actionable insights to enhance teacher well-being, ultimately benefiting the quality of education delivered to students.

Key words: Emotional Intelligence (EI), Role Conflict, Mental Health, Occupational Stress. Teacher Educators

Introduction: Emotional Intelligence (EI) refers to the ability to recognize, understand, manage, and effectively use emotions in oneself and others. Goleman (1995) emphasized that individuals with high EI are better equipped to navigate complex social settings and manage both personal and interpersonal challenges. For educators, EI involves being attuned to one's own emotions, as well as those of students and colleagues, and using this emotional awareness to guide actions and decision-making. In this study, emotional intelligence is assessed through ten factors, including self-awareness, empathy, emotional stability, and integrity. Role Conflict, as defined by Kahn et al. (1964), occurs when individuals face conflicting demands between their different roles, which is particularly relevant for teacher educators juggling personal, professional, and administrative duties. The study measure's role conflict across six dimensions, such as family conflict and professional growth conflict. Mental Health, defined by the World Health Organization (2004), pertains to emotional, psychological, and social well-being and plays a critical role in how teachers manage stress and make decisions. The study uses a standardized tool to evaluate the mental health of teacher educators, focusing on factors like anxiety and depression. Occupational Stress, defined by Kyriacou (2001), arises from an imbalance between job demands and the resources available to meet them. The study measures this stress through a 30-item scale divided into nine dimensions, such as workload and role ambiguity. Predictors of occupational stress in this research include Emotional Intelligence, Role Conflict, and Mental Health, which are analyzed to understand their influence on stress levels among teacher educators, with the aim of developing interventions to reduce stress and improve well-being. This study addresses an urgent necessity in the educational field by examining the complex relationship between emotional intelligence, role conflict, and mental health as predictors of occupational stress among teacher educators. The well-being of teacher educators is vital, as it directly influences the quality of education they deliver to students.

Occupational stress, if left unchecked, can lead to burnout and reduced teaching effectiveness, negatively impacting both the educator's emotional health and the learning environment. By offering research-based insights, this study provides actionable recommendations aimed at fostering a healthier, more supportive atmosphere for teacher educators, ultimately benefiting the entire educational ecosystem.

Significance of the Study: The significance of this study lies in its exploration of key psychological factors—emotional intelligence, role conflict, and mental health—that contribute to occupational stress. Emotional intelligence equips educators with the ability to manage emotions and handle stressors, while role conflict, often stemming from competing responsibilities, exacerbates stress levels. Furthermore, mental health, a critical yet frequently overlooked factor, profoundly impacts an educator's capacity to maintain resilience. Understanding these elements can lead to tailored interventions and support systems that not only protect the mental and emotional health of teacher educators but also enhance the educational experience for students, reinforcing the need for this comprehensive investigation. The research focuses on teacher educators who play a crucial role in shaping future teachers, and their well-being directly affects the educational outcomes of their students. The institutions affiliated with Kuvempu and Davanagere Universities provide a relevant and context-specific sample for this study. These universities were selected due to their large number of affiliated B.Ed. colleges and teacher educators, which makes them representative of the teacher education landscape in the region. The survey method allows the researcher to collect data from a broad population, ensuring that variations in emotional intelligence, role conflict, and mental health across different educators can be captured and analyzed in relation to their occupational stress levels. The existing literature on emotional intelligence, role conflict, mental health, and occupational stress among teacher educators reveals critical insights, while also highlighting several research gaps that require further exploration. Studies consistently demonstrate a significant relationship between emotional intelligence and occupational stress. However, there is a need for more focused research to understand how emotional intelligence specifically mitigates various stressors, including role conflict and stress triggered by the global pandemic. The balancing act between professional responsibilities and personal life, particularly for women educators, has been a recurring theme in the literature. This calls for in-depth analysis of gender-specific stressors and the coping mechanisms employed by both male and female educators, as their experiences in managing work-life balance often differ significantly. Moreover, much of the current research centers on internal factors contributing to stress, while overlooking external factors such as educational policies, societal pressures, and economic constraints. Exploring these external influences can provide a more holistic view of how they affect teacher educators' emotional intelligence and overall well-being. Comparative studies across different educational systems or cultural contexts could also shed light on how emotional intelligence and stress manifest in diverse environments, opening avenues for culturally sensitive interventions. By addressing these research gaps and expanding on the existing body of work, future studies could offer deeper insights into the complex interplay between emotional intelligence, role conflict, mental health, and occupational stress. Such research will be crucial in developing targeted interventions and support systems to enhance the well-being of teacher educators in various contexts.

Statement of the Problem: The statement of the problem of the present survey is, Teachers Emotional Intelligence, Teachers Role Conflict and Teachers Mental Health as Predictors of Occupational Stress among Teacher Educators

Objective of the Study:

- To examine the differential contribution of predictor variables (Emotional Intelligence, Role Conflict, and Mental Health) in predicting the criterion variable (Occupational Stress) among Teacher Educators through regression analysis.

Hypothesis of the Study:

- There is no significant differential contribution of Emotional Intelligence, Role Conflict, and Mental Health in predicting Occupational Stress among Teacher Educators.

Methodology: The present study follows a descriptive research design of the survey type, aimed at exploring how Emotional Intelligence, Role Conflict, and Mental Health influence Occupational Stress among teacher educators. This research does not involve experimental manipulation but instead relies on gathering quantitative data through surveys from teacher educators working in various Secondary Teacher Education Institutions affiliated with Kuvempu and Davanagere Universities in Karnataka State. The study seeks to investigate correlations between these psychological and emotional factors and the levels of occupational stress experienced by the participants. By analyzing these relationships, the study intends to offer valuable insights into the challenges teacher educators face and contribute to developing strategies to mitigate stress.

Area, Population, and Sampling of the Study:

The study focuses on teacher educators from B.Ed. colleges affiliated with Kuvempu and Davanagere Universities in Karnataka State, India. These two universities together account for 52 B.Ed. colleges, with a total population of 287 teacher educators. Among these, Davanagere University has 34 colleges with 175 teacher educators, while Kuvempu University has 18 colleges with 112 educators. This population forms the basis of the study, representing a diverse group of teacher educators in secondary education institutions. The sample for the study was selected randomly to ensure a representative cross-section of educators. In total, 45 B.Ed. colleges were sampled, with data collected from 110 male and 70 female teacher educators, making the total sample size 180 educators. The sampling considered both aided and unaided institutions, ensuring that the diversity of the teacher education landscape in Karnataka was adequately reflected. Ethical considerations were rigorously followed, with participants providing informed consent, and confidentiality and anonymity were maintained throughout the research process. By examining this sample, the study aims to draw meaningful conclusions about the factors contributing to occupational stress among teacher educators in this region.

Analysis and Interpretation of the Data:

The analysis of the above Objective, which aimed to study the difference in the contribution of Emotional Intelligence, Role Conflict, and Mental Health in predicting Occupational Stress among Teacher Educators, was conducted using Multiple Linear Regression.

Table 1: Shows Summary of ANOVA for Regression.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.706[a]	0.498	0.489	25.11741

a. Predictors:)Constant(, Teachers Mental Health, Teachers Emotional Intelligence, Teachers Role Conflict

b. Dependent Variable: Teachers Occupational Stress

The findings presented in Table -1 indicate that, the predictor variables—Emotional Intelligence, Role Conflict, and Mental Health—explain approximately 49.8% of the variance in Occupational Stress, as indicated by the R-squared value (0.498). The adjusted R-squared (0.489) accounts for the number of predictors, showing that nearly 48.9% of the variation in Occupational Stress is explained after adjusting for the predictor variables. The standard error of the estimate (25.11741) reflects the degree of deviation of predicted scores from actual Occupational Stress scores, suggesting a reasonably good model fit.

Table 2: Regression co-efficient of Teacher Educators. (Model Summary).

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	110,075.344	3	36,691.781	**58.159**	**0.000[b]**
Residual	111,035.606	176	630.884		
Total	221,110.950	179			

a. Dependent Variable: Teachers Occupational Stress

b. Predictors:)Constant(, Teachers Mental Health, Teachers Emotional Intelligence, Teachers Role Conflict

The ANOVA results in Table-2 reveal a highly significant F-statistic (F = 58.159, p = 0.000), indicating that the overall regression model is statistically significant. This confirms that at least one of the predictors—Emotional Intelligence, Role Conflict, or Mental Health—significantly contributes to the explanation of Occupational Stress.

Table -3: Multiple Linear Regressions of Predictor Variables on Criterion Variable of Teacher Educators.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
)Constant(	70.327	11.550		**6.089**	**0.000**
Teachers Emotional Intelligence	-0.403	0.074	-0.318	**-5.450**	**0.000**
Teachers Role Conflict	0.522	0.072	0.450	**7.274**	**0.000**
Teachers Mental Health	0.751	0.253	0.169	**2.964**	**0.003**

a. Dependent Variable: Teachers Occupational Stress

Further breakdown of the individual predictors in Table-3, highlights their specific contributions. Teachers' Emotional Intelligence has a negative unstandardized coefficient (B = -0.403), suggesting that as Emotional Intelligence decreases, Occupational Stress increases. This negative effect is statistically significant (t = -5.450, p < 0.001). Teachers' Role Conflict, with an unstandardized coefficient (B = 0.522), shows a strong positive contribution to Occupational Stress, meaning that higher Role Conflict leads to higher stress levels, and this relationship is highly significant (t = 7.274, p < 0.001). Teachers' Mental Health also has a positive contribution to stress, though weaker (B = 0.751), and the impact remains statistically significant (t = 2.964, p = 0.003).

Table-4: Relative Contributions of Predictor Variables on Criterion Variable.

Predictor Variables	Beta	r	β x r	% of Contribution
Teachers Emotional Intelligence	-0.318	-0.500	0.159	15.9%
Teachers Role Conflict	0.450	0.630	0.2835	28.35%
Teachers Mental Health	0.169	0.328	0.055432	5.5432%
Total			0.497932	49.7932%

Table-4 provides a detailed analysis of the relative contributions of each predictor variable. Teachers' Role Conflict accounts for the largest share of the variance in Occupational Stress (28.35%), followed by Emotional Intelligence (15.9%) and Mental Health (5.54%). This suggests that while all three predictors significantly influence Occupational Stress, Role Conflict is the most dominant factor. Emotional Intelligence also plays an important role but has a moderate influence. Mental Health, though significant, contributes the least to Occupational Stress among the teacher educators. These findings underscore the need for targeted interventions that address Role Conflict and enhance Emotional Intelligence to mitigate Occupational Stress in the teaching profession.

Findings and Discussions: The findings of this study reveal that the predictor variables—Emotional Intelligence, Role Conflict, and Mental Health—account for nearly 50% of the variance in Teacher Educators' Occupational Stress, with Role Conflict contributing the most (28.35%), followed by Emotional Intelligence (15.9%) and Mental Health (5.54%). These results align with existing literature that emphasizes the significant role of role conflict and emotional intelligence in shaping occupational stress levels in the teaching profession. Role conflict is identified as the strongest predictor of occupational stress in this study. This finding is consistent with earlier research that highlights how conflicting demands between personal and professional roles can exacerbate stress. For example, Kyriacou (2001) found that teachers experience high levels of stress when faced with competing expectations from administrative tasks, teaching, and personal responsibilities, contributing to role conflict. Similarly, Zhang et al. (2020) identified role conflict as a key stressor in educational settings, especially when teachers must balance administrative duties with student-centric responsibilities. Emotional intelligence, although less influential than role conflict, still plays a critical role in predicting occupational stress. This is consistent with studies that demonstrate the importance of emotional regulation in managing stress. For instance, Brackett et al. (2010) found that teachers with high emotional intelligence are better equipped to manage classroom challenges and stressful situations, as they can effectively recognize and regulate their own emotions and those of others. This ability to navigate emotional complexities likely explains why emotional intelligence emerged as a significant, albeit moderate, predictor of stress in this study. Mental health, while contributing less to the prediction of occupational stress compared to the other variables, remains a significant factor. Mental health issues such as anxiety and depression can increase susceptibility to stress, as noted in studies by Lazarus and Folkman (1984), which suggest that poor mental health weakens an individual's coping mechanisms in response to stressors. Although the present study shows that mental health has a weaker impact on occupational stress than role conflict or emotional intelligence, its significance highlights the need for mental health support within educational institutions. The findings are well-supported by existing literature. Role conflict is the dominant contributor to occupational stress, which underscores the need to address the multiple demands placed on teacher educators. Emotional intelligence, though not as

influential, remains a crucial protective factor against stress, and mental health, while contributing less, should not be overlooked as it plays a vital role in educators' overall well-being and stress management strategies. These results suggest that targeted interventions focusing on reducing role conflict and enhancing emotional intelligence may prove effective in mitigating occupational stress among teacher educators.

Implications of the Study:

1. The study emphasizes the need for emotional intelligence training for teacher educators. Programs that develop skills in self-awareness, emotional regulation, empathy, and relationship management can reduce occupational stress, leading to improved well-being and job performance among educators.

2. Educational institutions should prioritize role clarification to minimize role conflict. Providing clear job descriptions and reducing ambiguity can enhance job satisfaction and lower stress levels. Additionally, fostering a supportive work environment that promotes teacher-student relationships and peer support can alleviate stress.

3. Teacher educators with low emotional intelligence or high role conflict should be offered targeted interventions, including counselling and resources to improve emotional competencies. Training in conflict resolution, time management, and communication can equip teachers with coping strategies to manage role-related stress effectively.

4. Policymakers and educational leaders must recognize the impact of role conflict and emotional intelligence on occupational stress. Policies promoting emotional intelligence training, mental health resources, and strategies to manage role conflict should be implemented to create healthier and more supportive educational environments for teacher educators.

Conclusion: The Present study underscores the significant interplay between Emotional Intelligence, Role Conflict, and Mental Health in influencing Occupational Stress among teacher educators in Karnataka. The descriptive research design, employing quantitative surveys, provided a comprehensive analysis of 180 educators from B.Ed. colleges, revealing that these factors collectively account for nearly 50% of the variance in occupational stress levels. Notably, Role Conflict emerged as the most substantial contributor, highlighting the complex demands faced by educators in balancing multiple responsibilities. While Emotional Intelligence also plays a vital role in mitigating stress, Mental Health, despite its lower contribution, remains an essential consideration for overall educator well-being. The implications call for targeted interventions, including emotional intelligence training and role clarification, to enhance job satisfaction and reduce stress. By addressing these critical areas, educational institutions can foster a healthier, more supportive environment that promotes the well-being and effectiveness of teacher educators.

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E- WALLETS AS CATALYST FOR SUSTAINABLE DIGITAL TRANSFORMATION IN MOBILE COMMERCE BUSINESS: A STUDY ON CONSUMER PERCEPTION IN SELECT TALUKS OF DAKSHIN KANNADA DISTRICT

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Abstract

Digitalization has significantly reshaped the commerce landscape, particularly with the rise of digital wallets (e-wallets) within the mobile commerce ecosystem. India's digital payments market driven by mobile commerce is expected to grow to $1 trillion by 2026, this spotlights emergence of e-wallets as a crucial tool that enable seamless, secure, and efficient transactions, thus enhancing the functionality and sustainability of m-commerce platforms. This study investigates consumer behavior and preferences regarding usage of e wallets among differentiated age groups and delves into the role of digital wallets in promoting a cashless economy by fostering contactless, secure transactions, enhancing consumer convenience, and supporting environmentally sustainable business practices. Furthermore, the study highlights current trends in mobile commerce, emphasizing how e-wallet integration is vital for the deployment of advanced technologies such as artificial intelligence (AI), blockchain, and the Internet of Things (IoT). These technologies are transforming digital commerce by enabling more intelligent, personalized, and responsive shopping experiences. The findings offer valuable insights into the potential of e-wallets to support sustainable growth, drive digital transformation, and meet the expanding objectives of Industry 4.0 and look ahead to the capabilities of Industry 5.0, positioning e-wallets as integral to future of m-commerce business and contribute to the evolving digital economy.

Keywords: E-Wallets- M-Commerce- Digitalization – Sustainable Business- Economy

Introduction: In an era where digitalization is rapidly reshaping various facets of our lives, mobile commerce stands out as a transformative force in business. The advent of digital wallets designed for secure, convenient transactions—has accelerated this shift, driving significant changes in consumer behavior and business operations. As businesses seek to integrate these technological advancements, the concept of sustainable digital transformation has gained prominence. This transformation is not merely about adopting new technologies but about leveraging them in ways that align with broader sustainability goals. E-wallets have emerged as a pivotal element in this context. Their adoption reflects a growing consumer preference for seamless, efficient payment solutions that transcend traditional banking methods. This shift is particularly noticeable in regions like Dakshin Kannada district, where mobile commerce is gaining traction. Understanding how consumers perceive these digital tools is crucial for businesses aiming to align their strategies with sustainability and growth objectives. The impact of e-wallets extends beyond convenience; it signifies a shift towards a more sustainable and inclusive digital economy. As mobile commerce grows, the ability of e-wallets to enhance transactional efficiency while minimizing environmental footprints highlights their role as catalysts in this digital transformation. As businesses and consumers increasingly prioritize sustainability, understanding the role of e-wallets in fostering a sustainable digital transformation becomes critical. This study aims to uncover insights into how these digital tools are shaping the future of mobile commerce and contributing to a more sustainable business ecosystem.

Objectives:

1. To explore consumer awareness and adoption of e-wallets for M-Commerce transactions in the selected taluks of Dakshin Kannada

2. To assess consumer's gender-based perception of e-wallets in terms of convenience, security, and usability for M-Commerce Transactions

3. To examine the role of e-wallets in fostering a sustainable digital economy positioning as integral to future of m-commerce business and its contribution to the evolving digital economy.

Methodology: This study employs a mixed-methods approach, combining quantitative data analysis with qualitative interviews and surveys. The data has been analyzed in terms of frequency, usage trends, and behavioral patterns of digital payment systems, with the aim to provide insights into the consumer behavior in the mobile commerce transactions due to digital payment mode. Additionally, this study on mobile commerce transactions will enable us to gain a comprehensive understanding of their motivations, preferences, and the factors influencing their choices. A simple random sampling technique was used for this descriptive research study. The relevant data are presented in appropriate tables. As a tool and techniques for this research study tables, pie chart, simple percentage, independent t test and moderated multiple regression analysis are used to interpret data.

Hypothesis:

H0: Gender does not moderate the relationship between trust in security and perception of E-Wallets as a sustainable tool.

H1: Gender moderates the relationship between trust in security and perception of E-Wallets as a sustainable tool.

The critical role of e-wallets in fostering Essential digital transformation in mobile commerce sector: The adoption of e-wallets in Dakshin Kannada is steadily increasing, particularly in urbanized taluks, where consumers are more familiar with mobile commerce. This growth is driven by ease of use, convenience, and faster transaction times. Consumers generally perceive e-wallets as secure, especially those with features like two-factor authentication and encryption. This update has made e-wallet indispensable in the digital transformation of Dakshin Kannada's mobile commerce sector. According to the Reserve Bank of India, digital payment transactions, including e-wallets, grew by 46% in rural and semi-urban areas in 2023, indicating a growing shift towards cashless transactions and significantly improving the user experience in mobile commerce transactions. E-wallets are seen as a tool for financial inclusion, providing access to digital financial services even to consumers in semi-urban and rural areas of Dakshin Kannada. Their accessibility is particularly beneficial for individuals who previously lacked access to formal banking systems. Consumers associate e-wallets with promoting a sustainable digital ecosystem by reducing the reliance on paper-based transactions and contributing to a cashless economy. In Dakshin Kannada, government initiatives like Digital India and increasing smartphone penetration have accelerated the adoption of e-wallets. Local businesses, especially small and medium enterprises (SMEs), have reported a 30% rise in sales through mobile commerce, driven largely by e-wallet payments. Additionally, a survey conducted by the National Payments Corporation of India revealed that 65% of consumers in semi-urban regions now prefer using e-wallets due to convenience, cashback incentives, and enhanced security features. This data highlights that e-wallets are not just a convenience but a necessity for sustainable economic and digital growth in Dakshin Kannada. This aligns with broader trends toward eco-friendly business practices. Peer influence and social media have played a major role in shaping consumer perception of e-wallets.

Positive word-of-mouth and peer recommendations are often crucial in motivating new users to adopt digital wallets for mobile commerce.

Literature Review: The integration of e-wallets in mobile commerce has revolutionized digital transactions, acting as a significant catalyst for sustainable digital transformation. E-wallets, also known as digital wallets, have emerged as a convenient and secure method for making financial transactions, particularly in the realm of mobile commerce. With the increasing penetration of smartphones and internet services, consumers are rapidly adopting e-wallets for daily transactions, including shopping, bill payments, and money transfers (Lal, 2020). The adoption of e-wallets in mobile commerce has become a key driver of the digital economy, shaped consumer behavior and transformed how people interact with businesses. E-wallets offer a seamless, cashless experience that aligns with modern consumer expectations for speed, efficiency, and security. As digital payments gain momentum, especially in regions like Dakshin Kannada district, they are not only enhancing the shopping experience but also playing a significant role in the broader digital transformation of commerce (Kumar, 2019).The shift from traditional payment methods to digital platforms like e-wallets is driven by factors such as convenience, speed, and enhanced security features, making mobile commerce more accessible and user-friendly (Kumar & Singh, 2021). Moreover, e-wallets play a pivotal role in fostering financial inclusion by reaching out to the unbanked and underbanked populations. This has been particularly evident in emerging economies where banking infrastructure is less developed. By providing an easy-to-use platform for transactions, e-wallets have significantly contributed to reducing the digital divide (Sahoo, 2019). Several studies highlight the convenience of e-wallets as one of the most appealing features for consumers. In a world where time is becoming increasingly precious, the ability to make quick payments with just a few taps on a smartphone appeals to busy individuals and tech-savvy younger generations (Patel & Desai, 2020). This convenience has made e-wallets a preferred payment method for mobile commerce, helping businesses cater to a growing number of customers who prioritize efficiency. In addition to this, e-wallets also offer an added layer of safety, with features like two-factor authentication, encryption, and real-time notifications, which gives users peace of mind during their transactions (Chaudhary & Kumar, 2018). However, while many users are enthusiastic about the transition to e-wallets, there are still hurdles to overcome. Some consumers, particularly older generations or those in rural areas, may be hesitant to adopt new digital technologies due to concerns about security or simply unfamiliarity with how the systems work. In regions like Dakshin Kannada, where local communities may vary in terms of digital literacy, addressing these concerns becomes crucial. A study by Rajan and Shetty (2021) notes that building trust through education and support is key to increasing adoption rates, particularly among less tech-savvy populations. When businesses and financial institutions offer clear guidance and assurances about the security of digital transactions, it helps bridge the gap between traditional and modern commerce. The rise of e-wallets is also closely tied to changing consumer perceptions of financial management. With features like transaction tracking and spending summaries, e-wallets are enabling people to monitor and manage their finances more effectively. This has proven especially useful for those in regions where traditional banking services may not be easily accessible (Sharma & Nayak, 2019). For individuals who previously relied on cash or informal financial systems, e-wallets provide a gateway to more structured and transparent financial habits. This shift is not only empowering consumers but also contributing to the growth of a more inclusive digital economy. In the context of sustainability, e-wallets represent more than just a technological shift—they align with global goals to

reduce environmental impacts. The reduction in the need for paper receipts, physical currency, and trips to ATMs or banks means fewer resources are consumed in the financial transaction process (Gupta & Verma, 2020). For regions like Dakshin Kannada, where balancing economic development with environmental sustainability is crucial, e-wallets offer a practical solution that benefits both consumers and the planet. The integration of advanced technologies such as blockchain, biometric authentication, and artificial intelligence in e-wallets further enhances security and trust, which are critical in driving consumer adoption and satisfaction (Ramesh & Rao, 2018).In the context of sustainability, e-wallets contribute to reducing the environmental impact of paper-based transactions and the carbon footprint associated with cash handling and physical banking infrastructure (Sharma & Jain, 2020). As more businesses and consumers shift to digital payments, e-wallets facilitate the reduction of resource consumption and promote greener practices in mobile commerce. Additionally, the digital nature of e-wallets allows for better tracking of spending patterns, which helps consumers make more informed and sustainable purchasing decisions (Gupta & Verma, 2021). In regions like Dakshin Kannada district, the adoption of e-wallets is also influenced by local economic conditions, digital literacy, and the availability of supporting infrastructure such as reliable internet connectivity and smartphone penetration (Shetty, 2022). Studies have shown that consumer perceptions toward e-wallets in such regions are largely positive, with ease of use, security, and convenience being the main drivers for adoption. However, challenges such as privacy concerns, lack of awareness, and occasional technical glitches persist (Prabhu, 2021). Addressing these issues through targeted educational campaigns and improving the digital infrastructure will be key in ensuring the sustained growth and widespread acceptance of e-wallets in the mobile commerce sector. Furthermore, as the use of e-wallets grows, businesses are increasingly leveraging this technology to offer personalized, customer-centric services. According to Mishra and Reddy (2020), the data collected through e-wallet transactions allows businesses to understand consumer preferences, enabling them to tailor offers and services that enhance customer satisfaction and loyalty. In turn, this strengthens the relationship between consumers and businesses, driving more sustainable economic growth in the mobile commerce sector.

Overall, the literature suggests that e-wallets are a crucial component of the digital transformation in mobile commerce, offering benefits that align with both consumer needs and sustainability goals. The continued evolution of e-wallets, supported by technological advancements and consumer trust, is expected to further drive the growth of mobile commerce, particularly in developing regions like Dakshin Kannada district.

Framework:

Conceptual Framework for E-Wallets in Digital Transformation of Mobile Commerce
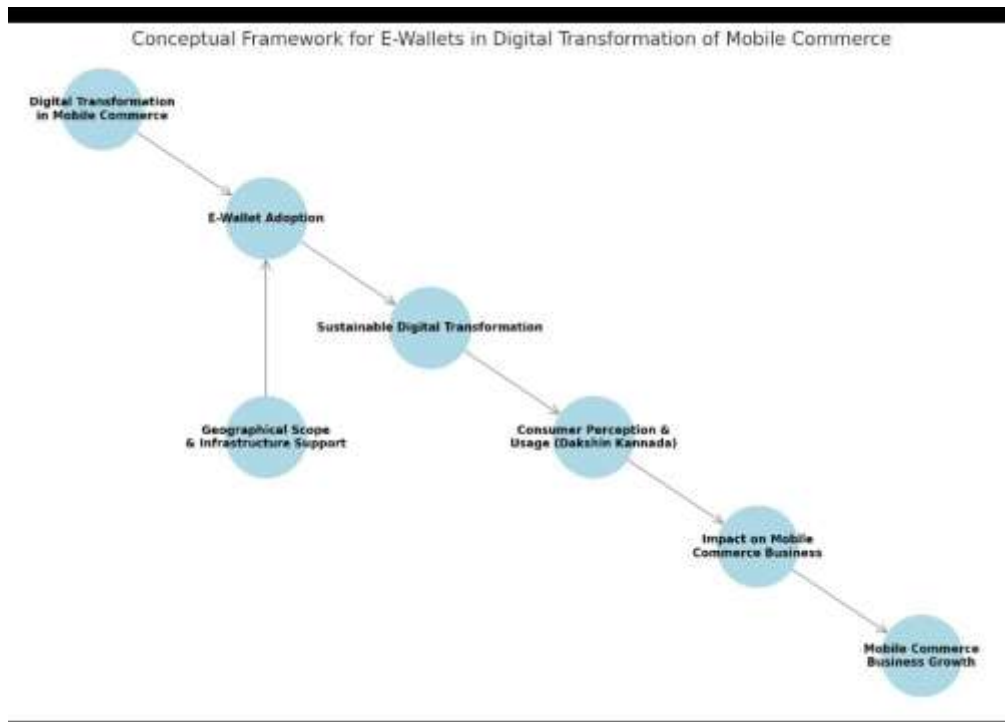
Data Analysis and Interpretation:

Mobile Commerce and future of Digital transactions

In order to study the Mobile commerce pattern, the respondents were asked about their frequency of shopping, mode of payment, factors influencing the e-wallets preference and their satisfaction level.

Figure Number 1.1: Frequency of Engagement in Mobile commerce transaction

Do you engage in Mobile Commerce transactions (using mobile for shopping, paying bills, banking and financial transactions etc.)
157 responses

- Yes
- No

96.2%
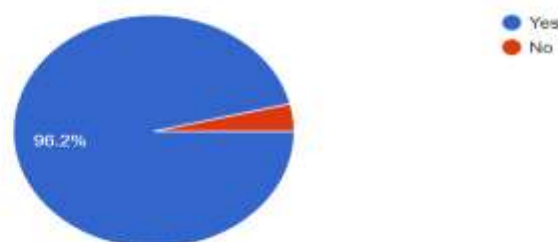
From the above table it is evident that most respondents, 96.2% reported their engagement in mobile transactions for shopping, bill payments, banking, and financial transactions, while the remaining 3.8% indicated that they do not use their mobile for these activities.

The findings of the research collectively suggest that the overall frequency of engagement in mobile commerce was exceptionally high among the surveyed individuals

Figure Number 1.2: Preferred mode of payment and their purpose

Generally for online shopping activities which mode of payment do you prefer
157 responses
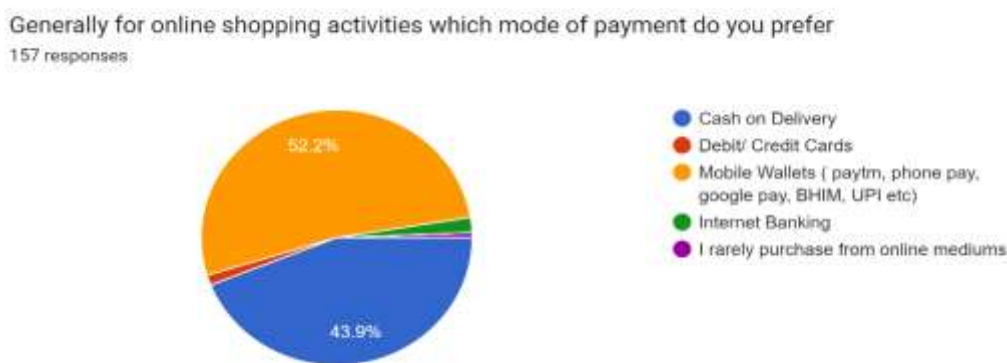
Out of 157 respondents surveyed on their preference for mode of payment during shopping activities, 82 (52.6%) indicated a preference for mobile wallets, while only 2 (1.3%) preferred debit or credit cards. Additionally, 69 (44.2%) respondents favoured cash on delivery, and 3 (1.9%) preferred internet banking.

Respondents shared their preferred purposes for using digital payments. The majority, 113 respondents (78.5%), indicated using digital payments for online shopping, while a close number of 111 respondents (77.1%) preferred digital payments for bill payments. Additionally, a significant portion of 111 respondents (77.1%) reported using digital payments for banking and financial transactions. A smaller 3.5% of respondents, mentioned using digital payments for advertising, while 13 (9%) respondents utilized digital payments for customer care services. Only one respondent (0.7%) disclosed using digital payments for offline shopping.

Figure Number 1.3: Factors Influencing the Preference of digital payment

Which factors most influence your behavior towards using digital payment systems for mobile commerce transactions?
156 responses

From the above table it becomes apparent that various factors play pivotal roles in influencing the digital payment of the respondents. Notably, the most significant influence, reported by 64.7% of the participants, stems from convenience Followed with security and privacy with 20.5% and 8.3% of respondents, respectively, cited these factors as influential in their trust in the system. The significance of these elements underscores the importance of a diverse and appealing factors, coupled with

ambiguity, in attracting and retaining users. Some other factors that influence are cost effectiveness (5.8%) and time consideration (1.9%)

Figure Number 1.4: Current usage and satisfaction from digital payment system

Out of 157 respondents, 65 (41.4%) stated that they use digital payment systems for mobile commerce transactions very frequently. Meanwhile, 66 (42%) respondents stated that they use it occasionally, 23(14.6%) respondents said they use it rarely, and only 3(1.9%) respondents mentioned that they never use digital payment systems.

According to a survey conducted on the satisfaction with the current digital payment systems available for transactions, 66.2% of the respondents stated that they are satisfied. Additionally, 24.8% of the respondents mentioned that they are highly satisfied, while 8.9% stated that they are neutral towards digital payment systems. Interestingly, none of the respondents reported being dissatisfied with the current digital payment system.

This data indicates that most of the respondents have a positive perception of the existing digital payment systems, and they frequently and occasionally use digital payment for mobile commerce transactions. A significant portion of the respondents expressed high satisfaction, suggesting that they are pleased with the convenience, ease of use, and overall performance of these payment methods.

Table Number 1.5: Respondents' Experience with Digital Payments for Mobile Commerce Transactions

	Number of Respondents	**Percentage**
Increased Significantly	40	25.5%
Increased Slightly	73	46.5%
Stayed relatively the same	39	24.8%
Decreased Slightly	5	3.2%
Decreased Significantly	0	0
Total	157	100%

Figure Number 1.5: Respondents' Experience with Digital Payments for Mobile Commerce Transactions

Has your average transaction volume increased or decreased since adopting digital payment systems for mobile commerce transactions?

157 responses

- Increased significantly
- Increased slightly
- Stayed relatively the same
- Decreased slightly
- Decreased significantly
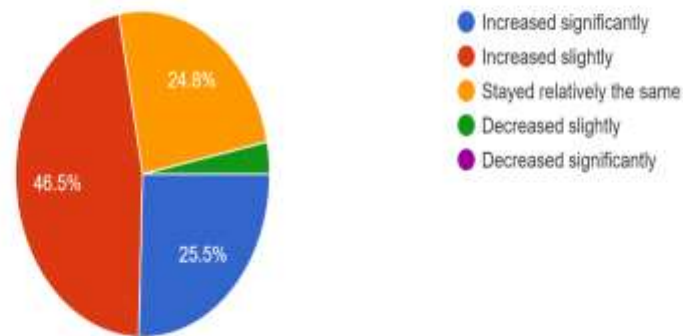
Upon examining the data from our survey, it is evident that most respondents have experienced changes in their usage of digital payments for mobile commerce transactions since the implementation of digital payment systems. The distribution of responses is as follows:

46.5% of the respondents reported that they have slightly increased their usage of digital payments for mobile commerce transactions since the adoption of digital payment systems.25.5% of the respondents stated that their usage of digital payments has increased significantly. 24.8% of the respondents mentioned that their usage pattern has remained relatively unchanged. The remaining respondents (3.2%) reported that their usage of digital payments for mobile commerce transactions has decreased significantly.

Figure Number 1.6: Benefits of using Digital Payments for Mobile Commerce Transactions

3. What are the benefits you perceive in using digital payment systems for mobile commerce transactions?

156 responses
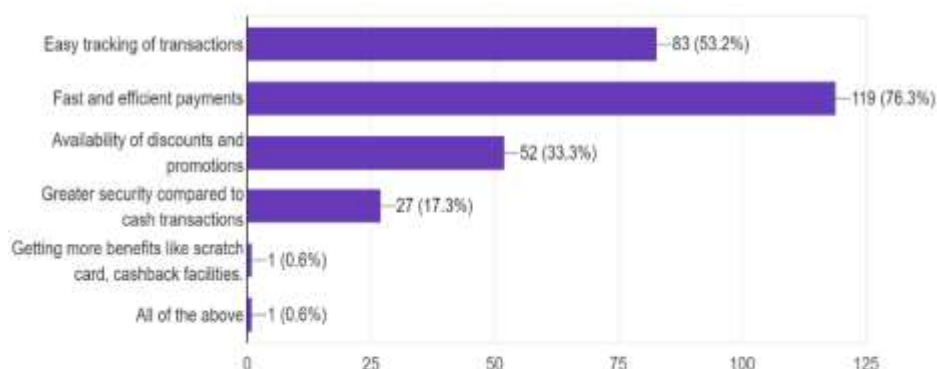
In the survey conducted, a significant portion of the participants, which constitutes 76.3%, highlighted the advantage of fast and efficient payment in digital payment systems. This is followed by 83 respondents (53.2%) who emphasized the ease of tracking information. Availability of discounts and promotions was mentioned by 52 participants (33.3%), while 27 respondents (17.3%) focused on the enhanced security provided by digital payment systems compared to traditional cash transactions. Lastly, one participant mentioned the added benefits like scratch cards and cashbacks as a key advantage for using digital payment systems in mobile commerce transactions.

Testing of Hypothesis:

Hypothesis: (moderated multiple regression)

H0: Gender does not moderate the relationship between trust in security and perception of E-Wallets as a sustainable tool.

H1: Gender moderates the relationship between trust in security and perception of E-Wallets as a sustainable tool.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.199[a]	.040	.033	.591	
2	.464[b]	.215	.200	.538	1.980

a. Predictors: (Constant), Gender

b. Predictors: (Constant), Gender, Are you satisfied with the current security measures of e-wallets, sec_gender

c. Dependent Variable: what's your perception towards e-wallets as a sustainable tool for future of m-commerce

ANOVA[a]

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.261	1	2.261	6.471	.012[b]
	Residual	54.846	157	.349		
	Total	57.107	158			
2	Regression	12.284	3	4.095	14.159	.000[c]
	Residual	44.823	155	.289		
	Total	57.107	158			

a. Dependent Variable: what's your perception towards e-wallets as a sustainable tool for future of m-commerce

b. Predictors: (Constant), Gender

c. Predictors: (Constant), Gender, Are you satisfied with the current security measures of e-wallets, sec_gender

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	4.748	.155		30.562	.000	4.441	5.055		
	Gender	-.241	.095	-.199	-2.544	.012	-.427	-.054	1.000	1.000
2	(Constant)	2.934	1.050		2.795	.006	.860	5.007		
	Gender	-.290	.650	-.240	-.447	.655	-1.574	.993	.018	57.020
	Are you satisfied with the current security measures of e-wallets	.400	.246	.376	1.628	.106	-.085	.885	.095	10.516
	sec_gender	.036	.154	.126	.233	.816	-.269	.341	.017	57.543

a. Dependent Variable: whats your perception towards e-wallets as a sustainable tool for future of m-commerce

Since the p-value for the interaction term sec_gender is 0.816, which is greater than the common threshold of 0.05, the interaction effect is not statistically significant. This means that gender does not significantly moderate the relationship between trust in the security of e-wallets and the perception of e-wallets as a sustainable tool.

Conclusion:

The study has failed to reject the null hypothesis. Therefore, the results suggest that gender does not moderate the relationship between trust in security and the perception of e-wallets as a sustainable tool for the future of m-commerce.

Findings: The findings of this study will contribute to the existing literature on users experience with digital Payments for Mobile Commerce Transactions and provide valuable insights for industry practitioners and developers. Armed with a better understanding of consumer behavior and preferences, mobile commerce applications can tailor their offerings and strategies to enhance user experiences, increase subscriber loyalty, and consumer-friendly market. Likewise, digital payment applications can use these insights to foster a convenient, secure, competitive and drive revenue growth.

- Out of the 157 participants surveyed, 88 of them were females, while 69 were males. Most of them fell within the age range of 18 to 28 years old. A significant portion of these individuals were students who actively engaged in mobile commerce transactions utilizing digital payment systems.
- The frequency of engagement in mobile commerce was exceptionally high (96.2%) among the surveyed individuals
- The main purpose of using digital payments was online shopping (73.9%), payment of bills (72.5%) and banking and other financial transactions (72.5%).
- Most of the respondents (52.2%) used mobile wallets for mobile commerce transactions. On the contrary,43.9% still preferred cash on delivery for M- Commerce transactions highlighting huge scope for market growth.
- Major part of users (64.7%) experience convenience with Digital Payments, followed with security and privacy in transactions (20.5%), trust in the system (8.3%), cost effectiveness (5.8%) and time factor (1.9%) for Mobile Commerce transactions
- 41.4% of the respondents frequently use and 41.4% occasionally prefer digital payments for m-commerce transactions.

- The study demonstrates that the current digital payment systems are well-received among the respondents, with high satisfaction levels (24.8%) and satisfaction (66.2%) are reported. The absence of dissatisfaction suggests that these systems are meeting the needs and expectations of most users in terms of their transactional experience.

- Most respondents have either experienced a slight (46.5%) or significant (25.5%) increase in their usage of digital payments for mobile commerce transactions. This suggests a positive trend in the adoption and usage of digital payment systems for mobile commerce activities.

- A significant portion of the participants, which constitutes 76.3%, highlighted the advantage of fast and efficient payment in digital payment systems. This is followed by 83 respondents (53.2%) who emphasized the ease of tracking information.

- Availability of discounts and promotions was mentioned by 52 participants (33.3%), while 27 respondents (17.3%) focused on the enhanced security provided by digital payment systems compared to traditional cash transactions.

- Regarding the challenges faced in digital payment systems, most of the respondents, 79.5%, identified technical issues and errors as the primary concern. The second most common challenge mentioned by 32.7% of the participants was the concern about privacy and data security. A smaller portion of the respondents, 0.8%, highlighted the limited acceptance of digital payment systems in local businesses as a significant hurdle. Additionally, 9% of the participants expressed difficulties in understanding how to use the digital system is a great hurdle. Interestingly, one respondent shared that they have never encountered any of these issues.

- Regarding the recommendation of digital payment systems, a significant majority of 60.9% of the respondents expressed their support by stating that they would indeed recommend it to others. Additionally, 37.8% of the participants indicated a likelihood of recommending digital payment systems. Conversely, a minor 1.3% of the respondents mentioned that they would never recommend using digital payment systems. Chi – square test proves that mobile commerce transactions become more prevalent in Dakshina Kannada, customer behavior towards digital payment systems will shift towards greater acceptance and reliance on such payment methods, leading to a significant impact on the future of mobile commerce transactions in the region.

- In the context of promoting digital payment systems for mobile commerce transactions, respondents were asked about the awareness of initiatives or programs in Dakshin kannada. For which, 48.1% answered that they were not aware of any such initiatives or programs. Meanwhile, 34.4% expressed their awareness but stated that they had not participated in any of these initiatives. A smaller percentage, 11.7% mentioned that they were aware of the initiatives and have taken part in them. The remaining respondents, accounting for 5.8%, chose not applicable option.

- Regarding the likelihood of continuing to use digital payment systems for mobile transaction induction in the future, most of the respondents provided their insights. Among them, 54.1% stated that they were moderately likely to continue using these systems. Additionally, 42.7% of the participants expressed a high likelihood of continuing to use digital payment systems for mobile transactions. Now, considering the 1.9% who chose to integrate their response, they are uncertain about their future usage of digital payment systems. Lastly, 1.3% of the respondents

mentioned that they were not likely to continue using digital payment systems for mobile transactions.

- when asked about improvements for digital payment systems in mobile commerce transactions, 71% of respondents focused on widespread acceptance by local business. Among them, 56% suggested enhancing the user interface and instruction, while 80% stressed the need for secure and safe transactions. Regarding usability, 46% of the participants highlighted the importance of better customer support and making the systems more convenient in terms of conditions and terms. Lastly, 2% emphasized the significance of raising awareness and educating users about potential digital payment threats.
- Many consumers are drawn to e-wallets due to the cost savings they offer through cashback offers, discounts, and rewards programs. These incentives encourage repeated use and foster loyalty toward e-wallet platforms.
- Trust levels vary depending on the brand of the e-wallet. Global brands tend to be trusted for their security features and technological robustness, while local e-wallets gain traction due to their user-friendliness, language support, and alignment with regional needs.
- Younger consumers are more likely to adopt and use e-wallets frequently for mobile commerce, while older demographics show slower adoption rates due to a lack of digital familiarity or a preference for traditional payment methods.
- E-wallets have proven to be beneficial for small businesses by offering them a cost-effective and efficient method of accepting payments. They have also enabled SMEs to scale their operations and reach a broader customer base in mobile commerce.

Overall, the findings demonstrate that the current digital payment systems are well-received among the respondents, with high satisfaction levels reported. The absence of dissatisfaction suggests that these systems are meeting the needs and expectations of most users in terms of their transactional experience. most respondents have either experienced a slight or significant increase in their usage of e- wallets for mobile commerce transactions. This suggests a positive trend in the adoption and usage of e-wallets for mobile commerce activities.

Recommendations

- Implementing awareness campaigns and educational programs to inform customers about the benefits and ease of using digital payment systems in conjunction with mobile commerce transactions.
- Implementing more robust security measures to ensure the safety and privacy of customer data during mobile commerce transactions, which will increase trust and confidence among customers in using digital payment systems.
- Streamlining the process of digital payments and mobile commerce transactions to make it more user-friendly and efficient, which will encourage more customers to adopt digital payment systems.
- Ensuring a reliable and efficient digital payment infrastructure in Dakshina Kannada, such as adequate network coverage and internet connectivity, is crucial for the seamless execution of mobile commerce transactions and digital payments.

Conclusion: E-wallets are more than just a payment tool—they are transforming consumer behavior, enhancing financial inclusion, and contributing to a more sustainable digital economy. The ongoing adoption of e-wallets in Dakshin Kannada district reflects a broader global trend toward a digital-first

approach to commerce, one that is reshaping not only how people buy and sell but also how they perceive and interact with money. Through a combination of convenience, security, and accessibility, e-wallets are paving the way for a more inclusive, sustainable, and digitally empowered future.

In summary, this study explores the intersection of e-wallets and sustainable digital transformation within the mobile commerce sector, focusing on consumer perceptions in Dakshin Kannada district. It seeks to provide a nuanced understanding of how e- wallets are not only driving growth but also fostering a more sustainable and inclusive digital economy.

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THE EFFICACY OF GAMIFICATION AND MASTERY LEARNING STRATEGIES IN GEOGRAPHY ACADEMIC PERFORMANCE OF HIGH SCHOOL STUDENTS

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Graphical Abstract
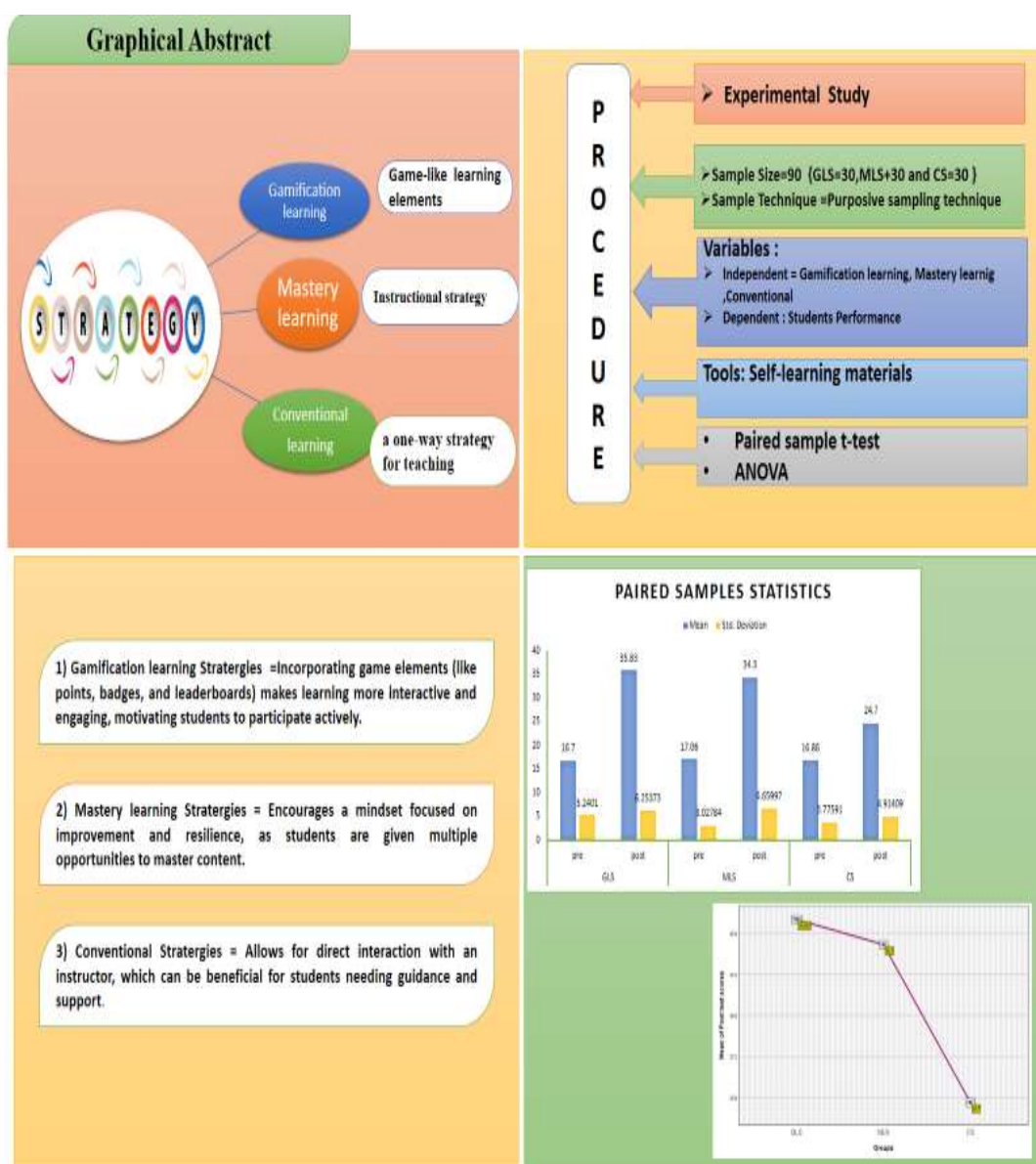
Introduction: Geography is vital and helpful for everyone who wants to adapt to the rapidly changing trends in our world, not only students. The centre of geographical studies is the earth, which serves as the stage for almost all human activity. Because of this, it is conceivable that man is aware of the nature of the planet, its phenomena, and the effects of his interactions with it. The general goals of teaching and learning geography illustrate the importance of geography as a topic in the classroom. There is now more focus on the educational and experience ramifications for the students than there was in the past, when the curriculum confined itself to a factual, examination-oriented approach. There are three main categories into which geography training falls: physical, human, and regional geography. Physical geography was the main focus of this study because students frequently shown some challenges in it. Additionally, there have been unsatisfactory complaints regarding pupils' performance in this area of geography on the Senior Secondary School Certificate Examinations administered by the National Examination Council (NECO) and the West African Examinations Council. Over time, newer and more efficient approaches have supplanted older ones in the formal classroom setting, changing the methods and strategies used to convey knowledge. Education experts increasingly hold the view that, given the right circumstances, everyone can learn. This shift in perspective has completely transformed the idea and methods of classroom instruction. It offers a venue for educators and learners to engage in an inclusive teaching and learning process; this phenomena helps students connect with and apply what they are learning, which lessens the abstraction that comes with applying traditional teaching techniques. One of these strategies, the Mastery Learning Strategy, may help children who are having trouble with physical geography. Students are given an infinite number of opportunities to demonstrate their mastery of the material being taught under the Mastery Learning Strategy (MLS). This is a teaching approach where students are given the chance to grasp a specific lesson unit before moving on to the next. Although the concept of the instructional technique dates back to earlier times, Benjamin S. Bloom's writings are largely responsible for the majority of contemporary uses of mastery learning. Predicted that achievement inequalities between students with different levels of academic ability would be lessened in a classroom that prioritises mastery learning rather than the traditional style of instruction. According to Bloom's theory of school learning, almost every student can acquire the material if the right circumstances are there. The technique of "gamification of education" involves introducing gaming aspects into a learning environment in order to boost student engagement (Dichev and Dicheva 2017). Gamification's primary objectives are to improve specific skills, introduce learning objectives that give learning a purpose, engage students, maximise learning, encourage behaviour change, and foster socialization (Knutas et al. 2014; Krause et al. 2015; Dichev and Dicheva 2017; Borges et al. 2013). They stated that gamification provides chances for students to collaborate, compete, and take an active role in their education. Gamification, like other teaching strategies, may have certain drawbacks, though. Research on this subject suggests that competitive circumstances may have an adverse effect on slow learners (Coşkun, 2012) An further constraint is to the possibility that games that are incongruent with learning objectives may not facilitate students in meeting these objectives (Ülküdür, 2016).

Objectives:

1) To find out the wither there is any significant difference between in the pretest and posttest mean scores of high school students taught through with and without GLS, MLS, and Conventional strategy.

  2) To examine the effects of in the Post test mean scores of high school students taught through with and without GLS, MLS, and Conventional strategy.

Hypotheses:

1) There would be no significant difference between C.G, E.G1and E.G2. in the pre-test And Post test mean scores of students in geography taught with and without Gamification and mastery learning strategies.

2) There would be no significant difference between Boys and Girls . in the pre-test And Post test mean scores of geography taught with and without Gamification and mastery learning strategies.

3) There would be no significant effect between Gamification and Mastery learning strategies .

Materials and methods: Pre-test and post-test with a control group design were researcher's employed in the quasi-experimental investigation. The Sampling Procedures and Sample 90 students made up the sample used in the study. were selected through the use of purposive sampling methods.inside a specific Ballari district For instance, the control (lecture) group was assigned to one of the Girls and Boys schools, while the experimental 1 (GLS) and experimental 2 (MLS) groups were assigned to the other. Only thirty (boys and girls) who offered geography were selected from the eight classes that made up the study, for a total of ninety (90) people. The researcher created self-study materials for students in the Mastery learning group and then applied statistical techniques, specifically the t-test and ANOVA.

Results:

Objectives 1: To find out the wither there is any significant difference between in the pretest and posttest mean scores of high school students taught through with and without GLS, MLS, and Conventional strategy.

1. **H[1]:** There would be no significant difference between E.G-1, E.G-2 and C.G-3. in the Pre-test And Post test mean scores of students in geography taught with and without Gamification and mastery learning strategies.

  Table 1: Comparison of E.G-1, E.G-2 and C.G-3. in the Pre-test And Post test mean scores

Group	Test	N	Mean	Std. Deviation	df	t-value	p-value	Hypothesis supported
GLS	pre	30	16.70	5.24010	29	-13.666	.000	YES
	post		35.83	6.25373				
MLS	pre	30	17.06	3.02784	29	-12.856	.000	
	post		34.30	6.65997				
CS	pre	30	16.86	3.77591	29	-6.122	.000	
	post		24.70	4.91409				
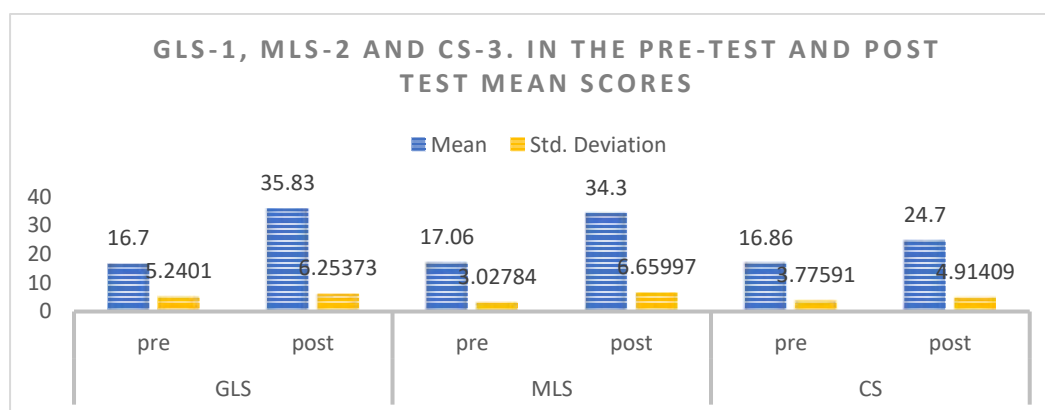
Above the Table 1 and Graph shows that the GLS 16.70-35.83, MLS-17.06-34.30, and p-value 0.000 indicate the t-value 0f Pre test - Post test mean scores. In this case, the p-value is less than the significance level of.05. As a result, the hypothesis is rejected at the significance level of.05. This implies that students' pre- and post-test mean scores in geography, which is taught using gamification and mastery learning strategies, would alter significantly.

2. **H²:** There would be no significant difference between Boys and Girls . in the pre-test And Post test mean scores of geography taught with and without Gamification and mastery learning strategies.

Table 2: Comparison of Boys and Girls . in the pre-test And Post test mean scores of geography.

Significant difference between Boys and Girls . in the pre-test And Post test mean scores									
Groups	**Gender**	**Test**	**N**	**Mean**	**Sd**	**df**	**t-value**	**p-value**	**Hypothesis supported**
GLS	Male	Pre test	15	17.0667	5.02091	14	-10.536	.000	Yes
		Post test		35.6000	4.85210				
	Female	Pre test	15	16.3333	5.60187	14	-8.846	.000	
		Post test		36.0667	7.57314				
MLS	Male	Pre test	15	17.4000	3.01899	14	-10.040	.000	
		Post test		32.4667	6.23202				
	Female	Pre test	15	16.7333	3.10453	14	-9.123	.000	
		Post test		36.1333	6.77038				
CS	Male	Pre test	15	15.6667	4.23703	14	-4.085	.001	
		Post test		24.4667	5.61715				
	Female	Pre test	15	18.0667	2.91466	14	-4.845	.000	

Post test	24.93 33	4.2839 7

SIGNIFICANT DIFFERENCE BETWEEN BOYS AND GIRLS MEAN SCORES
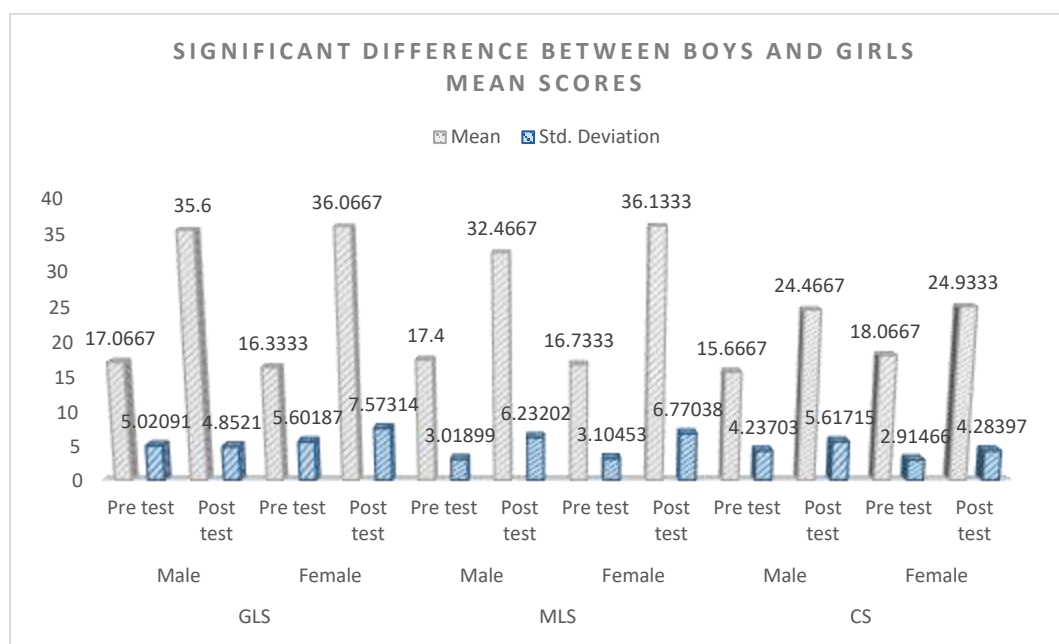
From the above Table 2 and Graph reveals that the t-value 0f Pre test - Post test mean scores are indicated by the GLS pre test mean male 17.06 post test mean 35.6, pre test mean female 16.33 post test mean 36.06, MLS pre test mean male 17.40, post test mean male 32.466, and female pre test mean 16.73, post test mean 36.133, and p-value 0.000. The p-value in this instance is below the significance threshold of.05. The hypothesis is therefore disproved at the significance level of.05. This suggests that there is no discernible difference between male and female students. the mean scores of the pre- and post-tests for geography lessons delivered using gamification and mastery learning techniques.

Objective 2: To examine the effects of in the Post test mean scores of high school students taught through with and without GLS, MLS, and Conventional strategy.

3.   **H³:** There would be no significant effect between Gamification and Mastery learning strategies .

Table 3: Comparison of Post test mean scores of high school students taught through Between group and Within group.

GR	Sum of Squares	df	Mean Square	F	Sig.	Hypothesis supported
Between Groups	2184.622	2	1092.311	30.451	.000	Yes
Within Groups	3120.767	87	35.871			
Total	5305.389	89				

Significant effect between Gamification and Mastery learning strategies .
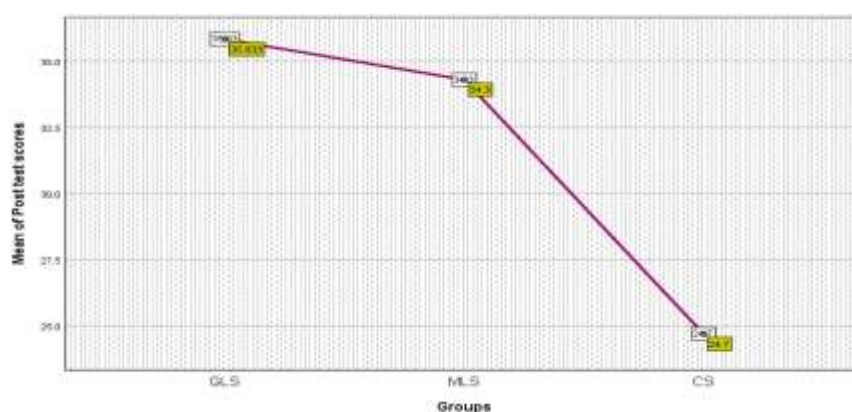
From the above table 3 and Mean plots , it is evident to say that the main effect of students performance can be obseverd from the obtained F- value is 30.451 and the p- value is .000, is lesser than the significant level.

Inference: it means P>0.05.Thus, the above stated null hypothesis can be rejected and we restate as there is a significant effect between Gamification and Mastery learning strategies

Discussion: The findings of the study revealed that there was no significant difference in the mean performance of geography students before they were taught geography using GLS and MLS and the conventional strategies. This suggests that the three groups were quite homogenous at the start of the study. It implies that students used for the study have relatively equal background knowledge of geography. The result also showed that the students in the GLS group performed better than those in the MLS group and then the control group. The study's findings indicate that there are notable differences between students' mean performance scores when math is taught through gamification, mastery learning, and conventional strategies, as well as between students' mean retention scores when math is taught through these methods versus conventional strategies. According to the study's findings, MLS is a useful teaching strategy that should be promoted to educators and included into curricula in Nigerian and other African countries (Ochihu, Otor Amos 2022). According to Mezieobi, Fubara and Mezieobi (2015), the strategy is concerned with the recall of factual knowledge and largely ignores higher levels of cognitive outcomes, the teacher seeks to transfer thought, and meanings to the learners leaving little room for student-initiated questions, independent thought orinteraction between students' learning process. This is in agreement with Olubodun (2016) who opined that MLS improved the performance of Mathematics student, and Oluwatosin and Bello (2015) that MLS is an effective tools for improving the performance of student in Physics, it has been argued that conventional teaching method is content centered in which teachers remain more active, more cognitive and less effective (Singh, 2004)

Conclusion: The study had been able to show that GLS and MLS are more effective in improving the academic achievement of students in Geography when compared with conventional teaching strategies, though the difference is not something to worry about. This implies that GLS and MLS has the capacity to help students associate ideas, think creatively, and make connections that might not be achievable in the conventional note taking strategy. Again, the two approaches used in this study do not differ in the ways they enhance the performance of Geography concepts by learns. This implies that the two could improve on the learners' learning   ability in the same proportion. It therefore entails that MLS would be one of the most effective learning strategies that could be employed by teachers to overcome many of the problems encountered in teaching and learning of Geography. In similar manner,

GLS could also be used to effectively teach and learn Geography   facilities needed for MLS are available; it should be utilized to be able to obtain maximum output by learners. Based on the findings of this study and the conclusion reached, the following recommendations are made.

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DIGITAL TOOLS FOR ASSESSMENT IN EDUCATION

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Abstract

Technological advances have given rise to various innovations in education, especially in assessing student learning outcomes using digital tools. These digital tools functions to help teachers assess student learning outcomes digitally, but each tool has differences in test types, features, ease of access and use, how to operate, costs for use and others. Presently the demands placed on education systems have changed. Teachers need certain competences such as technical, methodological, social and personal competences. The aim of education today is to create a new educational paradigm that prepares the workforce of the future for the new challenges. This change is accompanied by the introduction of new didactic concepts such as blended learning, which combines the advantages of face-to-face and online learning with the use of digital teaching tools that can help develop the desired competences. The pandemic has led to a huge and rapid increase in the use of digital tools in education, which has necessitated the development of digital tools in the field of education. The purpose of this study is to present the digital tools that have been introduced into education, the challenges in the use of digital assessment in education and that require the development of digital competences by students and teachers, thus enabling teachers and administrators of educational institutions to take advantage of the use of digital tools.

Key Words: Digital tools, Assessment, Education, Challenges.

Introduction: Over the past few years, education has rapidly and permanently incorporated technology. Consequently, various technological solutions are also involved in assessment. As teaching and learning change and develop in a digital direction, assessment is also becoming more digital, opening up new opportunities and also creating new issues that need to be addressed, such as validity, reliability, transparency and plagiarism. Digital assessment and e-assessment are concepts that were chosen from a fairly wide range of different in terms of online assessment, computer-aided assessment etc, used in the field of education to denote an assessment process that uses different types of technology. E-assessment can be provided through specific applications or by learning management systems, and is becoming a daily necessity in the education process. Dynamic assessment, a form of alternative assessment, is recognized as an effective method for enhancing students' learning using technology. Technology allows assessment to be smooth and ubiquitous, as it becomes an integral part of any learning activity. Nevertheless, it should be remembered that technology is not a value in itself, and is only important in the process of learning and assessment if it is used to achieve pedagogical goals. It is important to note that there are three main aspects when choosing a technological application in educational contexts, i.e., context, student needs and pedagogical considerations. The involvement of learners and emphasizes the importance of how learner participation and engagement is increasing in the technology-enriched learning process. The involvement of students in assessment is important for a productive and efficient learning process not only as the recipients of assessment, but also individually as an assessor of one's own work and that of one's peer assessment. Using technology has been shown to provide significant support and offer a variety of solutions. One of the classic examples is the e-portfolio, which allows for the accumulation of evidence of the learner's knowledge and skills. This can be the basis for a student's reflection and self-assessment, as well as a good opportunity for discussion and peer assessment. The use of technology can ensure that assessment is participatory and

collaborative. Students can benefit from online peer assessment, as well as assessment, which benefits students cognitively and affectively.

Online Assessment: Online assessment typically includes tests, quizzes and questionnaires that teachers can administer to students so they can examine their progress in different learning areas. For example, they can include skill assessments, communication tests and behavioural evaluations. Online assessment platforms allow teachers to create tests based on curriculum content or learning development needs. They also allow teachers to track student data for future reports, allowing them to create more targeted educational practices. Online assessment can help teachers and other educational professionals evaluate elementary, middle, high school and undergraduate students. Teachers and professors may use these platforms to:

• Gauge a student's personality and response to a classroom environment

• Evaluate a student's current skills, abilities and knowledge

• Showcase a student's progress to their parents

• Help students transition to higher education or a future career

• Identify potential student teachers in a college setting

• Track a graduate student's master's or doctoral degree progress

Digital Assessment Tools for Teachers: Online teaching may require new educational platforms and assessment tools for teachers and students. For example, online assessment can help teachers track educational progress and provide students with key resources for learning new materials. By learning about different online assessment tools, you can determine which features best align with
your preferred teaching style. This paper, discusses digital assessment and list 30 online assessment tools teachers may use in their classrooms.

Technology Used to Transform Assessment in Education: Technology allows for a more diverse range of assessment types, including formative assessment s which involve gathering feedback on student learning to inform instruction, help teachers and learners to adjust learning strategies, and identify areas of strength and weakness. Online platforms and tools enable teachers to quickly and easily collect and analyze student data, providing them with valuable insights into student progress and needs. Popular forms of formative assessment include class polls and online quizzes that can be delivered through a learning management system (LMS) or an online quiz platform. Teachers can create quizzes that test students' knowledge and provide immediate feedback, thus allowing them to adjust instruction based on the results and to provide personalized support to individual students. Another example is digital exit tickets , a quick formative assessment that can be used to assess student learning at the end of a lesson or class period, allowing teachers to collect data on student learning quickly and easily.

Additionally, technology can help to facilitate more authentic assessments that more closely resemble real-world scenarios, which can provide a more accurate representation of a students' abilities augmented and virtual reality can provide students with immersive learning experiences that simulate real-world scenarios. For instance, an architecture student can use virtual reality to design and experience a 3D model of a building or structure, providing an authentic assessment of their ability to apply theoretical concepts in a practical context. Another example is video-based assessments, which require students to demonstrate skills and knowledge through video recordings and provide an authentic representation of their abilities. One other way that technology can be used to transform assessment is through the development of adaptive assessments. Adaptive assessments use artificial intelligence and

machine learning algorithms to adjust the difficulty level of questions based on a students' responses. Machine learning algorithms can analyze student data and provide personalized feedback on their strengths and weaknesses. By analyzing this performance data, the platform can provide targeted assessments that accurately assess students' abilities and provide actionable feedback to help them improve. This ensures that the assessment is personalized to the learner's ability level, which can increase motivation and engagement, providing a more accurate and detailed picture of a students' knowledge and skills. This approach will not only assist teachers in designing their instruction or class activities to meet the individual needs of students and improve learning outcomes, but also aid them in designing assessments that are tailored to each students' abilities and provide a more accurate representation of their knowledge and skills. Further, the use of digital portfolios allows students to showcase their learning progress and achievements through a collection of digital artifacts. This type of assessment can provide a more comprehensive and authentic representation of the students' abilities, by allowing them to showcase their work in a multimedia format. Students can include videos, images, and written reflections on their work, providing a more comprehensive view of their abilities than traditional paper-based assessments. For example, engineering students may take an assessment that requires them to design a product or solve a real-world problem. Using digital portfolios offers several advantages over traditional paper-based ones, including the ability to easily organize and share content, receive feedback from teachers. Technology can also facilitate collaboration and communication among teachers and students, which can lead to more meaningful assessment experiences. By using online collaboration tools, online discussion forums, video conferencing, and messaging platforms, students can communicate and work together in real-time, breaking down the barriers of time and space. Utilizing shared spaces for projects and assignments, teachers and students can create and assess assignments live, providing immediate feedback and fostering a collaborative learning environment. Technology can also enable peer review, allowing students to assess and provide feedback on each others work, promoting a sense of community and shared responsibility for learning.

30 Common Online Assessment Tools Are As Follows:

1. Assessment Generator: This online assessment software lets users create surveys, tests and assessments for teachers and their students. These tests may help teachers assess each individual's skills and progress and help improve decision-making. Each test measures a student's progress against past tests taken on the platform. Teachers may then share these detailed reports with students and parents by email or by them to display during group meetings together.

2. Award Force: Award Force uses a cloud-based platform to assess portfolios and assignments for teachers and students. It uses a plagiarism detector that can help teachers identify information students may have repeated from their sources, such as specific wording or general ideas. Teachers may also use the drag-and-drop form builder when creating tests and assessments for students to save time and produce more standardized testing options between classes.

3. Class Marker: Class Marker involves an online testing website where teachers can create online quizzes and progress reports. The program automatically marks and corrects tests and quizzes, giving teachers more time to work on more challenging assessments . You can share this data with a student's family directly to discuss a student's strengths and address areas of improvement.

4. Criteria: Criteria provides comprehensive personality examinations and assessments for teachers. Its assessment software suite uses data science, psychology, emotional intelligence and student aptitude

to give teachers and parents a stronger understanding of a student's capabilities. Teachers may then share this information with parents and use it when directing their lessons.

5. Edmodo: Edomodo provides an online platform where teachers can create personalized online assessments programs based on quizzes and tests. It provides an interface modeled after common social media platforms, which may help students feel more engaged in the assessment process. Students can create personalized posts on this program, showcasing assessment information to instructors, classmates and families.

6. EVA-SSESS: EVA-SSESS is interactive video-interviewing software that offers personality reports based on psychological analysis. To create these reports, teachers input information into the program's system so it can generate quizzes for students automatically. Educators can these in-depth reports to track a student's learning development and social skills, plus develop a growth plan alongside their families.

7. Exam Time: Exam Time provides teachers with an online assessment platform where teachers can build quizzes, share them with students online, track their progress, grade tests and share results with families. It provides a database of user-generated content from different teachers, allowing you to both use and supply shared resources in the wider educational community. It also provides templates and other design elements that can enhance the quality of your assessments and streamline your quiz creation process.

8. Flubaroo: Flubaroo integrates Google Forms and spreadsheet creation to provide teachers with an online assessment tool. You may create various questions, synchronize data collection to various spreadsheets, set up self-grading options and share results with students and parents. Teachers may also embed quizzes on a student's online profile or in emails using this assessment software.

9. IMocha: iMocha provides teachers with over 2,000 automated assessments for aptitude and technical skills. This website includes a database that teachers can use when creating unique quizzes and tests. They may print these tests or give them online, which allows them to share information more easily with students and parents. College professors may use this platform as well. For example, professors may use iMocha when screening for blockchain, digital marketing, programming and coding capabilities in their students.

10. Inspera Assessment: Inspera Assessment provides universities, schools and training facilities with secure standardized tests and a simple grading platform. Teachers may create open- or closed-book exams and use diagnostics tests when gauging student capability. These diagnostic tests examine how well a student understands their lessons by checking their success against expected development, including comparing their results to their peers. Teachers may then share this information with students or parents when tracking educational progress.

11. Learning Pod: Learning Pod integrates nearly 50,000 different education questions in a diverse quiz bank that uses multiple topics and education levels. Subjects include general and specific courses in writing, English, math and science. Each question comes from trusted and accredited educational organizations. Teachers can use this data bank to produce individualized quizzes for students. They can send these tests online or print tests for classroom use.

12. McQuaig: McQuaig focuses on career aptitude and can help high school teachers assess students pursuing a vocational track. For example, teachers can use this platform to test a student's personality,

cognitive ability and behavioral traits. As a result, they can learn which job may help a student find career success and help them create a relevant academic plan.

13. Moodle: Moodle focuses on providing educators with multiple management and learning assessment opportunities. For example, teachers may use the Learning Management System (LMS) or Virtual Learning Environment (VLE) when engaging with students online and creating dynamic online tests or websites. Teachers may then share this information with parents when tracking student success.

14. ProProfs: ProProfs includes premium and free online assessment tools for teachers and students. The free version provides unlimited quiz creation and question integration. It also lets teachers give each test to as many students as they need to for each class they teach. The paid version includes privacy settings to enhance data protection and student tracking for gauging their progress. Teachers may share these quizzes online or print them for in-classroom grading and test-taking.

15. Qualified: Qualified may help computer science educators to assess a student's progress in a class. This platform includes multiple online tests students that gauge a student's coding abilities, plus their aptitude for the field. After, educators can use the program's data-tracking features to evaluate the results and help students identify any areas of improvement. They can also show these results to universities or a student's potential employer, depending on the context.

16. Smooth Hiring: Smooth Hiring uses online tests that gauge a person's capabilities and their fit for a job position. HSigh school teachers may integrate many of its features when gauging students, such as pre-made skill tests that evaluate a particular professional skill. Teachers can use these test results to help students transition to various professional careers by learning their core strengths and areas of improvement.

17. Socrative: Socrative provides an online platform students and teachers can use with cell phones and tablets. Teachers may select various educational games and exercises, integrate them into each student's electronic device and grade each game and exercise. Students and teachers can access this program through any web browser, either on laptops or mobile devices.

18. StoryPulse: StoryPulse provides an assessment platform for students and teachers that uses games as a part of the testing process, which may be especially helpful for younger students. Teachers can create surveys and assessment quizzes that use multiple questions to assess each student's academic strengths. It also presents stories to students based on real-world situations and gauges their reactions. You can use this information to draft a personality report that can help high school students understand their core traits for a future college or job application.

19. Survey Anyplace: Survey Anyplace allows teachers and others to create online assessments of student perspectives on educational topics and real-world scenarios, like conflicts between peers. These tests can either gauge a student's knowledge of a curriculum or their ability to overcome personal obstacles. Teachers may use this to better understand the viewpoints of their students and how they can best target their educational development.

20. TestGorilla: TestGorilla includes over 150 online tests teachers and hiring managers can use to understand their students' personalities and skills. These tests can gauge cognitive ability, overall personality, culture fit and language integration . College professors may use this option when gauging a student's capabilities with software, programming and advanced learning and studying skills.

21. TestMoZ: TestMoz generates automatically graded online tests that teachers can use when tracking student progress across multiple courses. There are a variety of question formats, including multiple-choice, essay, fill-in-the-blank options. Math teachers can also include numbers in their questions,

meaning it can help them gauge a student's progress in a particular learning area. They may share these tests online with families, school psychologists and other educational administrators.

22. Trivie: Trivie includes social learning platforms that track a student's knowledge and may improve their learning experience. This program uses multiple methods when analyzing a student's education. For example, artificial intelligence programs may examine a student's progress, compare it to other students. This information may help parents and teachers improve a student's experience by providing more support in areas where they struggle. Teachers may use this program when integrating new students into a class and when gauging a student's potential professional capabilities.

23. Weave: Weave integrates various software options for gauging student success, tracking educational outcomes and creating detailed progress reports. Teachers may use customized templates when creating these reports and share them with parents and students. They may also share this information directly with educational professionals, like other instructors, school counselors or school psychologists.

24. 9 additional online assessment tools

Here are some additional online assessment tools for educators:

• Quibblo
• Zoho Challenge
• Quizizz
• POLLEverywhere
• That Quiz
• Kahoot!
• Nearpod
• Lumio by SMART
• Schoology

Challenges in the Use of Digital Technologies in Assessment: Although the use of digital technologies in assessment offers a range of benefits over traditional paper-based assessment from increased convenience and accessibility to improved security and increased engagement – it is essential to note that digital technologies are not a replacement for conventional assessment methods.Digital technologies, such as online assessments, computer-based assessments, and mobile assessments, may have limitations in terms of security, accessibility, and reliability. For instance, internet connectivity issues or technical problems with hardware or software may negatively impact the assessment experience. Also, digital assessments may introduce new biases and fairness concerns that need to be addressed. For example, certain populations may be disadvantaged due to differences in technology access and/or familiarity with digital platforms. Rather, digital technologies should be used in combination with traditional methods to create a well-rounded assessment approach that provides a comprehensive picture of student knowledge and skills. In some cases, traditional assessment methods, such as written exams or hands-on assessments, may be better suited to assess specific skills or competencies. The choice of assessment method should be based on a variety of factors, including the goals of the assessment, the needs and preferences of the students, and the context in which the assessment is being administered

Conclusion: Online assessment tools can serve as the most appropriate alternative for the pen and paper based assessments of students, especially during this COVID-19 pandemic. Although it has some disadvantages, the benefits outweigh pitfalls. These game based quizzes will not only grab students'

attention but will also motivate them. It allows instructors to conduct mobile learning i.e. they can take assessments at any place, at any time and record results immediately. These e-learning tools enable us to spread education beyond the four walls of a classroom. Some add-ons of these technologies are inculcation of positive energy among students, exploration of new concepts and ultimately adding a pinch of fun in the classroom. It assures that this gamification of learning has enhanced students' engagement, including the most introverted ones, along with combining both a digital fast-paced and friendly competitive environment. So, let's get smarter and a little bit more digitized by blending e-learning technologies with our traditional ones because technology in the hands of great teachers can be transformational. In the future, education systems will face a number of challenges related to digitalisation. In this work, we have sought to provide a comprehensive picture of digital tools in education and how they can be integrated into education. As the use of digital tools is not yet fully integrated into the teaching-learning process, the aim of this study is to draw attention to the fact that the use of these tools can not only make the teaching-learning process successful, but can also have 'side-effects' that can help to continuously improve the competences of learners. The use of different digital tools also provides actively engaged students with skills that improve their problem-solving, speaking and critical thinking abilities. At the same time, the age of the students should be taken into account when using the tools, so that their competences and skills can develop appropriately. The use of digital tools in pedagogy provides a pathway for students success.

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NEW TRENDS AND MODERN APPROACHES IN EDUCATION
Flipped Classroom Models

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Abstract

Information literacy training could benefit from the flipped classroom approach, which involves using class time for hands-on application exercises while electronic lectures are delivered to students at home. This research paper outlines many of the flipped classroom teaching style features and provides examples from the literature on library instruction and contemporary developments in higher education. The model's pedagogical advantages are emphasized, along with any possible drawbacks. There are other names for the flipped classroom, such as the inverted classroom and more simply the flip. While there are varying origin legends, the majority give credit to Colorado High School chemistry professors Jonathan Bergmann and Aaron Sams for being the first to use recorded lectures in 2006. The notion of hybrid or blended, learning and problem-based learning which use new technology and active learning strategies to engage students led to the development of the flip. The two main features of the flipped classroom are the following: The practical application tasks which were formerly homework are brought into the classroom and the lecture is moved outside of the classroom often via electronic means (Educause, 2012). There are several more alternative elements that, in my opinion, maximize this framework and provide pupils with better learning chances, generating a wide result in a significant variance in actual practice ("Flipped Classroom Offers," 2011).

Keywords: Flipped, pedagogy, hybrid, blended, homework

Introduction: From slides, audio, podcasts, or narrated lectures to video casts that may also include animations, screen grabs, and other multimedia content, the lecture format has changed and grown. Additionally diverse are the learning objectives, engagement strategies, degrees of student autonomy, and other variables found in the classroom setting (Sams, 2011). The teaching strategy known as "flipped classroom" is having students study content outside of class and then apply it within class through activities. The goal of this blended learning approach is to improve student learning and engagement. Educators of all stripes highlight the benefits of the flipped classroom model, which include effective use of class time (Cole, 2009), increased student responsibility for learning (Overmyer, 2012), more active learning opportunities for students (Gannod, Berg & Helmick, 2008), and increased one-on-one interaction between students and teachers (Lage, Platt, & Treglia,2000).

Depending on the particular implementation, each of these characteristics may be more or less evident and have an impact on how well students learn. Teachers are under pressure to use class time more effectively as curricular requirements rise. By allocating class time to practical application rather than passive lecturing, students may maximize their learning experience in flipped classrooms (Cole, 2009). Electronic methods can be used to deliver lecture information just as effectively. It could even be enhanced because of instructors. This might have the effect of condensing a subject into its most crucial elements and eliminating any unnecessary details. Alternatively, teachers might employ the chunking approach, which divides a topic into many episodes covering subtopics, to facilitate student's access to and comprehension of a vast and interrelated collection of concepts. Interactive technology such as

online quizzes and lessons can also be utilized with electronic approaches. These extra elements are used occasionally to ensure that students are watching the lectures before class and other times to reinforce the ideas covered in the video lecture. By moving what has often been passive learning outside of the classroom, class time may now be used to concentrate on the more interesting aspects. This might condense a subject into its most crucial elements and eliminate any unnecessary details. Alternatively, teachers might employ the chunking approach, which divides a topic into many movies covering subtopics to facilitate student's access to and comprehension of a vast and interrelated collection of concepts.

Let us see how it functions:

Before class, students study the topic, and during class, they apply it through exercises.

Pupils can get more comprehension, learn at their own speed, and cultivate autonomous learning abilities. Activities in class students practice group projects, live problem-solving, comprehension assessment, and other tasks. Role of the teacher if we see Teachers should spend less time teaching new material and more time facilitating inquiry and teamwork.

Negative aspects Teachers spend more time planning than they would in a typical classroom, and students who don't have frequent access to the internet outside of class may be at a disadvantage. Online resources linked to the flipped classroom include Khan Academy, Coursera, TED talks, and even YouTube. These platforms offer access to lectures that have been recorded, educational films, and occasionally additional interactive components for teaching and learning. Frequently, teachers lesson material for the flip depends on these resources (Bull, Ferster and Kjellstrom,2012).

Why apply the flip?

Educators of all stripes highlight the benefits of the flipped classroom model, which include effective use of class time (Cole, 2009), increased student responsibility for learning (Overmyer, 2012), more active learning opportunities for students (Gannod, Berg & Helmick, 2008), and increased one-on-one interaction between students and teachers (Lage, Platt, & Treglia, 2000). Depending on the particular implementation, each of these characteristics may be more or less evident and have an impact on how well students learn.

Teachers are under pressure to use class time more effectively as curricular requirements rise. By allocating class time to practical application rather than passive lecturing, students may maximize their learning experience in flipped classrooms (Cole, 2009). Electronic methods can be used to deliver lecture information just as effectively. It could even be enhanced because of instructors might be required to keep video courses to a reasonable duration. This might have the effect of condensing a subject into its most crucial elements and eliminating any unnecessary details. Alternatively, teachers might employ the chunking approach, which divides a topic into many movies covering subtopics, to facilitate students' access to and comprehension of a vast and interrelated collection of concepts. Interactive technology such as online quizzes and lessons can also be utilized with electronic approaches. These extra elements are used occasionally to make sure that students are watching the lectures before to class, and other times to reinforce the ideas covered in the video lecture. By moving what has often been passive learning outside of the classroom, class time may now be used to concentrate on the more interesting aspects of Using time differently in this model raises several potential improvements, including more time for in-depth concept exploration, interaction with the material, and clarification, as well as more time for additional learning objectives and active learning practice (Boucher, Robertson, Wainner & Sanders, 2013).

Active learning is not exclusive to the flipped classroom approach; educators have been using active learning activities for years before Bonwell and Eison's 1991 paper on the subject for the Association for the Study of Higher Education (ASHE). Instructors have applied the idea of learning by doing to mold classroom experiences in a variety of ways. The flip gives students more time for active learning to occur in the classroom and motivates teachers to see active learning integration as an essential part of their instruction, as opposed to in addition to a lecture (Gannod et al., 2008).

Encouraging students to connect with ideas, resources, and classmates in the classroom leads to more one-on-one time spent with the instructor. Teachers can respond to queries and issues as they arise and follow up with individuals and groups throughout the classroom while students are working by designing exercises that let students handle themselves in small groups or alone (Lage, et al., 2000). Enfield (2013) pinpoints the opportunity that in-class work would present, together with students' struggles with novel material in assignments, as the particular justification for implementing the flip. More time is also available for prolonged class discussions and activities, which aid in students' conceptual comprehension (Kellogg, 2009). Pierce and Fox contend that the shift in focus from teacher accountability for students' learning to enhanced student responsibility is another frequently mentioned aspect of the flip (Educause, 2012). According to Gallagher (2009), students using this approach typically take a more active part in and ultimate responsibility for their education. They have to see the lecture in its entirety and participate in class in a number of ways.

Encouraging students to connect with ideas, resources, and classmates in the classroom leads to more one-on-one time spent with the instructor. Teachers can respond to queries and issues as they arise and follow up with individuals and groups throughout the classroom while students are working by designing exercises that let students handle themselves in small groups or alone (Lage, et al., 2000). Enfield (2013) pinpoints the opportunity that in-class work would present, together with students' struggles with novel material in assignments, as the particular justification for implementing the flip. More time is also available for prolonged class discussions and activities, which aid in students' conceptual comprehension (Kellogg, 2009). Pierce and Fox contend that the flipped classroom offers active learning in the classroom, supporting Pierce and Fox's claim that "quality, not necessarily the quantity, of student-teacher interaction is a compelling force in improving student performance" (2012, p. 4). Lage et al. (2000) caution that without more teaching assistants, this benefit would not be available to the larger classrooms. The shift in focus from teacher accountability for students' learning to enhanced student responsibility is another frequently mentioned aspect of the flip (Educause, 2012). According to Gallagher (2009), students using this approach typically take a more active part in and ultimate responsibility for their education. They have to see the lecture in its entirety and participate in class in a number of ways. In one instance, a teacher-researcher was especially interested in preparing students who would need to be able to control their learning very shortly, since they would be moving

on to a more project-focused phase of their curriculum the following semester. His goal in flipping his classroom was to teach his pupils to be more accountable for their education (Laman, Brannon, & Mena, 2012). Additionally, because of their liberty, diverse student learning may be encouraged. Students who need time to study content or to pause and think things through can do so with asynchronous access to lecture material, possibly in many formats. Meanwhile, students who are ready to move on to the next subject can do so immediately. Teachers can help students "transfer of learning to new situations" (Enfield, 2013, p. 16), which might be difficult for some, by providing examples in lecture topics that are different from those in-class activities. Learning differences are also accommodated in the classroom, where students may engage with the topic by asking questions and having discussions with their instructor, collaborating with classmates to solve issues based on the information, and making arguments or demonstrations. Students who need time to study content or to pause and think things through can do so with asynchronous access to lecture material, possibly in many formats. Meanwhile, students who are ready to move on to the next subject can do so immediately. Teachers can help students "transfer of learning to new situations" (Enfield, 2013, p. 16), which might be difficult for some, by providing examples in lecture topics that are different from those in-class activities. Learning differences are also accommodated in the classroom, where students can use questions and other forms of reflection according to certain cases (Lage et al., 2000), teachers informed students of their obligations at the start of the flipped course. Other cases stress the significance of communication in gaining student buy-in (Findlay-Thompson & Mombourquette, 2014). This type of warning may be used to empower students by letting them know that they are in charge of their education and to ensure that they are aware that this approach may need more of them than a traditional lecture. The degree of power that instructors grant their students may vary depending on the situation, but at the absolute least, by disclosing learning outcomes, they make sure that students know what to expect from electronic lectures and can use the skills in the classroom. This form of caution may be used to empower students by letting them know that they are in charge of their education and to ensure that they are aware that this approach may need more of them than a standard lecture. The degree of power that instructors grant their students may vary depending on the situation, but at the absolute least, by disclosing learning outcomes, they make sure that students know what to expect from electronic lectures and can use the skills in the classroom. Students now have more responsibility, therefore there should be clear expectations and a lot of help given. Communications in Information Literacy, 8(1), 2014 Arnold-Garza, The Flipped Classroom Teaching Model If students are asked to adapt to the model, they could react incoherently or uncomfortably. Success is not always hampered by this (Strayer, 2012). Teachers who foresee this impact and offer the assistance students require when

they encounter challenges may help students adjust and develop into more self-reflective, autonomous learners. According to Bergmann and Sams, giving different opportunities for students to interact with the material, outlining expectations for them to meet after a unit, and enabling display of offering a range of learning resources and being there for students at all times while they complete the procedure. Additionally, this model's "messiness" gives students a chance to learn from their mistakes and keeps teachers from "saving" them from difficulties so they may have a richer learning experience (Carpenter & Pease, 2012, p. 38).

The Flip is used by whom?

Many academic fields are experimenting with flipped classrooms; this study includes examples from the living sciences, business, engineering, and statistics. Because these fields frequently need students to grasp theoretical ideas and underlying principles before they can participate in problem-solving or practical application (Gannod et al., 2008), employing the flip is appealing to them. The paradigm is helpful "where content is usually more technical and linear," according to Overmyer (2012, p. 46). Since the subject matter lends itself to this paradigm, Martin adds (as reported in Berrett, 2012) that the humanities have traditionally taught by centering class time on conversation. While not quite the same as a flipped classroom, students finish assigned readings ahead of time.

Evaluating the classroom that was closed: Although the majority of the publications covered here employ techniques that do not directly test student learning as a result of the flip, some academics have addressed assessment of the flipped classroom approach. Some use student and teacher opinions of learning to assess learning indirectly. Some assess related elements, such as student involvement, which may serve as a learning indicator. A very small percentage of the evaluated publications described an evaluation approach that relied on final course grades, quiz scores, or Pierce & Fox (2012), as well as Laman et al. (2012), Boucher et al. (2013), and Findlay-Thompson & Mobourquette (2014).

Conclusion: The flipped classroom, which has gained interaction among educators of all ages and in a variety of educational settings, could provide some clear advantages for teaching in the classroom. This model's characteristics include emphasizing effective use of class time to accommodate a variety of learners, implementing problem-based learning, fostering greater student-teacher interaction, and empowering students to take ownership of their education so they can apply their acquired knowledge in different contexts. These characteristics make library education possible, which calls for students to participate in critical thinking and problem-solving techniques that are best acquired via experience, as well as to comprehend fundamental procedures that they may use in research scenarios. Limited information on librarians' experiments with the flipped classroom is currently available in the literature. Many people may find it difficult to carry out formal research on library instruction interventions, such as the flipped classroom, due to the difficulty of evaluating results.

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CHALLENGES AND OPPORTUNITIES IN DIGITAL EDUCATION: NAVIGATING THE FUTURE OF LEARNING

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Abstract

Digital education has transformed the way knowledge is disseminated, with technology facilitating access to learning materials, fostering collaboration, and enabling personalized learning experiences. However, while digital education offers numerous opportunities for students and educators, it also presents significant challenges related to accessibility, equity, infrastructure, and pedagogical adaptation. This article explores the major challenges faced in digital education, the opportunities it presents for enhancing educational practices, and the future directions for digital learning in both developed and developing contexts. It provides a comprehensive analysis of the challenges and opportunities in digital education, focusing on the implications for learners, educators, and institutions. The exploration of future trends and recommendations for optimizing digital education is also discussed to help shape effective learning environments in the digital age. Understanding these dynamics is crucial for educators, policymakers, and stakeholders aiming to optimize the potential of digital education in diverse learning environments.

Keywords: Digital Education, e-learning, Online Learning, Educational Technology, Accessibility, Equity, Learning Outcomes, Virtual Classrooms, Digital Literacy, Pedagogy.

Introduction: The rise of digital education, particularly in the last decade, has fundamentally altered the ways in which knowledge is delivered, accessed, and consumed. From online learning platforms to virtual classrooms, digital tools have provided learners with flexible opportunities to pursue education from anywhere at any time. However, the rapid expansion of digital education, accelerated by the COVID-19 pandemic, has revealed both tremendous potential and significant obstacles. This article explores the dual aspects of digital education, highlighting the opportunities it presents for improving access, personalizing learning, and enhancing collaboration. It also delves into the challenges faced by educators, learners, and institutions, such as inequitable access to technology, the need for improved digital literacy, and the sustainability of current models. The aim is to offer a balanced perspective on the digital education landscape and suggest avenues for addressing these challenges to harness the full potential of digital learning.

Opportunities in Digital Education: Digital education offers numerous advantages, including greater accessibility, personalization of learning experiences, and the ability to leverage technology for collaboration and creativity. These opportunities have the potential to revolutionize educational practices worldwide.

Increased Access to Education: One of the most significant opportunities afforded by digital education is expanded access. Students from geographically remote or economically disadvantaged backgrounds can now participate in quality educational programs that were once out of reach. Online platforms, such as Coursera, edX, and Khan Academy, have democratized education, making it possible for learners globally to enroll in courses from prestigious institutions. In addition, digital education caters to a wide range of learners, including non-traditional students such as working professionals, parents, or individuals seeking career changes. The flexibility of online courses allows learners to balance work, family, and study in ways that traditional classroom settings cannot.

Personalized and Adaptive Learning: Technology enables the creation of personalized learning paths, where students can progress at their own pace. Digital education platforms can use data analytics and artificial intelligence (AI) to assess student performance and adjust learning materials accordingly. This adaptability allows learners to focus on areas where they need improvement while advancing in topics they have mastered. Tools such as AI-driven tutors and learning management systems (LMS) provide real-time feedback and resources tailored to individual learning needs.

Collaborative Learning and Global Connectivity: Digital education fosters collaboration across borders, enabling students to connect with peers and instructors from diverse geographical and cultural backgrounds. Virtual classrooms and collaborative tools like Zoom, Google Meet, and Microsoft Teams facilitate interactive discussions, group projects, and peer learning, enhancing critical thinking and communication skills. The international dimension of digital education also prepares students for a globally interconnected world, broadening their perspectives through exposure to different viewpoints.

Data-Driven Insights: Digital learning environments provide institutions with a wealth of data that can be used to assess student engagement, progress, and performance. Learning analytics helps educators identify at-risk students, monitor learning patterns, and design targeted interventions. These insights allow for more effective instructional design and continuous improvement of course materials.

Lifelong Learning and Reskilling: Digital education supports lifelong learning by offering flexible learning options for individuals looking to acquire new skills or shift careers. In a rapidly changing job market, digital education provides opportunities for reskilling and up skilling, ensuring that learners can remain competitive in their fields. Courses on emerging technologies like AI, block chain, and data science have become increasingly popular, providing learners with the skills needed for future industries.

Challenges in Digital Education: While digital education presents numerous opportunities, it also poses several challenges that must be addressed to create equitable, effective, and engaging learning experiences.

Digital Divide and Access Inequality: One of the major challenges in digital education is the digital divide—the gap between those who have access to technology and those who do not. While digital learning platforms have expanded access to education, they have also highlighted inequalities, particularly in terms of internet connectivity, availability of digital devices, and technological infrastructure. Students from low-income families, rural areas, or developing countries often face significant barriers to participating fully in digital education. The unequal distribution of resources, such as high-speed internet and modern devices, means that students with limited access may struggle to keep up with their peers, leading to a widening educational gap. Moreover, students with disabilities may face additional challenges if digital platforms are not designed with accessibility in mind, further exacerbating inequalities.

Digital Literacy: Both students and educators must possess a certain level of digital literacy to engage effectively with online learning platforms. In many regions, there is a significant gap in digital skills, which can hinder the successful implementation of digital education initiatives. Educators may struggle to adapt their teaching methods to an online format, and students may lack the skills necessary to navigate digital tools effectively. Addressing this challenge requires investments in digital literacy training for both teachers and learners.

Student Engagement and Motivation: Engagement in digital education can be challenging, particularly in asynchronous online courses. The absence of face-to-face interaction and the lack of a structured learning environment may lead to feelings of isolation and reduced motivation among students. Keeping learners engaged in a virtual setting requires innovative instructional design, including interactive content, regular feedback, and opportunities for collaboration. Moreover, online learners often need to develop strong self-discipline and time-management skills to succeed, which can be difficult for younger students or those unfamiliar with independent study. Educators must find ways to support students in maintaining their motivation and participation throughout the course.

Pedagogical Challenges and Teacher Preparedness: The shift to digital education demands new pedagogical approaches, but many educators are unprepared for this transition. Traditional teaching methods may not translate effectively to online environments, where students expect more interactivity, multimedia content, and self-directed learning opportunities. In addition, educators need training in the use of digital tools, assessment methods for online learning, and strategies for fostering student engagement remotely. The lack of preparedness among teachers can lead to ineffective online courses and student dissatisfaction. Professional development programs that focus on digital pedagogy and the integration of technology in teaching are crucial for overcoming these challenges.

Assessment Integrity: One of the key concerns in digital education is maintaining the integrity of assessments. Online testing and evaluations are often vulnerable to academic misconduct, such as cheating or plagiarism. The difficulty in ensuring the authenticity of student work, combined with the absence of physical proctoring, raises concerns about the credibility of online assessments. Educational institutions must develop robust strategies, such as AI-based proctoring tools or project-based assessments, to address these challenges while ensuring fairness in grading.

Addressing Challenges and Harnessing Opportunities: To optimize the potential of digital education, institutions and policymakers must address the challenges while capitalizing on the opportunities.

Bridging the Digital Divide: Governments, educational institutions, and private organizations must work together to bridge the digital divide by expanding access to affordable high-speed internet, providing digital devices to underserved communities, and investing in infrastructure. Public-private partnerships can help distribute resources equitably, ensuring that all students have the tools they need to succeed in digital learning environments.

Improving Digital Literacy: Digital literacy programs should be integrated into both K-12 and higher education curricula, ensuring that students acquire the skills needed to navigate digital platforms effectively. For educators, professional development programs must focus on building competencies in digital pedagogy, technology integration, and online assessment techniques. Institutions should also provide ongoing technical support to ensure that both teachers and students can fully utilize digital tools.

Engagement and Interactivity: To keep students engaged in digital education, educators should focus on designing interactive and student-centered learning experiences. Incorporating multimedia content, gamification, and opportunities for collaboration can enhance engagement. Regular communication with students, whether through virtual office hours or discussion forums, can also help foster a sense of community and support in online learning environments.

Rethinking Assessment Models: To maintain academic integrity in online assessments, institutions must adopt alternative evaluation methods, such as project-based learning, open-book exams, or collaborative assignments. The use of AI-powered proctoring systems can also help monitor online tests, reducing the likelihood of cheating. However, institutions must ensure that these systems do not infringe on students' privacy or create undue stress.

Future Directions in Digital Education: The future of digital education will likely be shaped by the continued advancement of technologies such as artificial intelligence, virtual reality (VR), and block chain. AI-driven adaptive learning systems can further personalize education, while VR and augmented reality (AR) have the potential to create immersive learning experiences. Block chain technology could play a role in securing academic credentials and ensuring the transparency of student records. Moreover, as digital education becomes more embedded in mainstream education systems, hybrid learning models—combining in-person and online instruction—are likely to become the norm. These models offer the flexibility of digital learning while maintaining the social interaction and structure of traditional classrooms.

Conclusion: Digital education offers transformative opportunities for expanding access to education, personalizing learning experiences, and fostering global collaboration. However, significant challenges—such as the digital divide, issues of digital literacy, student engagement, and assessment integrity—must be addressed to ensure that digital education is both equitable and effective. As technology continues to evolve, stakeholders in education must work together to overcome these obstacles and fully realize the potential of digital learning for the future.

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INNOVATIVE PEDAGOGICAL APPROACHES FOR TEACHER EDUCATION

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Abstract

Education serves as a catalyst for the transformation of individuals by fostering reflection, awareness, and analytical thinking. It enables us to recognize our capabilities and encourages holistic development. In an era characterized by rapid technological and scientific advancements across various facets of life, innovative ideas and methodologies are essential for enhancing our comprehension of the teaching and learning process. This is particularly crucial in the realm of teacher education, which emphasizes skill-oriented training for prospective educators in both theoretical and practical dimensions. This study explores traditional and e-teaching methods for conveying knowledge to students. It also suggests different ways that might be used. In this paper, we build on our earlier research into new types of innovative practices. The study aims to focus. The aim of this study is to explore the importance of innovative practices within teacher education and to identify the challenges or obstacles encountered in the implementation of these new concepts or strategies in the field.

Keywords: Innovative, Teaching Learning, Teacher Educator.

Introduction: Education is fundamental to the cultivation of a skilled workforce globally. It is pivotal for the advancement and evolution of any society, facilitating the transfer of knowledge, skills, and values. Furthermore, education is instrumental in developing human capital, which is essential for driving technological innovation and fostering economic growth. In the contemporary era, information and knowledge are viewed as vital components for the progress and sustainability of humanity. Education serves not only as a means to achieve social development but also as a catalyst for advancement in an information-driven age, propelled by knowledge and research. The quality of education significantly influences students' perspectives and their ability to apply knowledge to real-world problems. Numerous studies have employed teaching effectiveness techniques to evaluate educational practices. Traditional teaching methods often reveal that many students fail to fully grasp course content when it is delivered in a conventional lecture format. Consequently, it has become increasingly important to enhance existing teaching methodologies and to implement innovative approaches. Identifying deficiencies in the teaching-learning process and adopting creative teaching strategies has become essential. Technology in education refers to the use of equipment and machines for learning objectives. It involves the extensive use of technical equipment, such as Various audio-video devices, hardware, software programs, and various Electronic products include audio and video films, tape recorders, projectors, computers, and laptops, etc. Educational technology encompasses more than just technology in education explained. It consists of three approaches: hardware, software, and system approach. It can be broadly described in two categories: Education technology is intrinsic. In general Refers to the use of behavioural science, such as educational psychology. Theories and practical teaching-learning challenges, as well as instruction and motivation, are discussed. It is concerned about the study.

Innovative Teaching: Efforts have been made to implement and test modifications in teaching methodologies across various higher education institutions, accompanied by comprehensive research in this domain. It is widely recognized that education serves as a significant catalyst for social transformation and enhances the quality of life for all societal members. Nevertheless, the enhancement of educational quality necessitates the adoption of innovative teaching strategies that not only engage

students but also inspire them. Innovative education integrates technology into pedagogical practices, thereby enriching the learning experience for students and providing benefits to faculty members (Khairnar, 2015). As globalization progresses, it is imperative for educators to adapt to technological advancements and address emerging needs to tackle complex challenges. To navigate this landscape, active teaching and learning strategies are essential, emphasizing the connection between theoretical knowledge and practical application to aid students in comprehending course material. Through these active methodologies, students are required to evaluate project scenarios that involve a diverse array of external and internal factors, necessitating both technical and non-technical skills during the problem-solving process. Consequently, the application of active strategies enhances the understanding of core concepts, encourages profound and innovative learning, and cultivates collaboration and communication skills.

The Utilization of Multimedia Tools: In today's digital age, multimedia stands out as a highly effective means of communication. Numerous educators are successfully integrating various forms of digital media, including text, images, audio, and video, to enhance student learning, and this approach has proven to be remarkably effective in facilitating knowledge acquisition. Traditional teaching methods have often led to a disconnect between the skills students acquire and the expectations of employers. In response, many institutions of higher education have adopted problem-based learning strategies to foster students' creative and analytical problem-solving abilities. This method is significantly enhanced by multimedia tools, which play a crucial role in shaping the learning environment. Multimedia technology allows educators to deliver content in a more impactful manner. Course materials are developed using multimedia technologies as required, and audio-visual presentations are crafted to ensure that students grasp the subject matter and remain engaged, thereby aiding in the retention of information over time. Various multimedia technologies encompass PowerPoint presentations, educational videos available on YouTube, broadcasts from Gyan Darshan, NPTEL video lectures, SWAYAM courses, MOOCs, and similar resources.

Role Playing: Role playing serves as an effective pedagogical strategy that enables students to swiftly apply their knowledge by immersing them in the perspective of a decision-maker tasked with policy formulation and optimal resource distribution. This approach is an excellent means of engaging students, fostering connections among peers, and encouraging them to fulfill the responsibilities assigned to them within their designated roles. The role-playing instructional method enhances students' comprehension of the subject matter, facilitating the achievement of their educational goals. Consequently, this leads to improved teamwork and collaboration among students. Utilizing role playing as a teaching and learning strategy can effectively address classroom challenges and strengthen interpersonal relationships. It is a valuable technique for simplifying complex subjects. Through role playing, students engage with academic content on a personal level. Many educators have discovered that this method is particularly effective in managing interpersonal issues within the classroom and in teaching essential human relations skills. The dramatization of events through role play can effectively convey literature, current affairs, and historical contexts.

Role playing aids students in developing

   (a) interpersonal relationships,

   (b) (b) social behaviors,

   (c) (c) self-assessment and lifestyle awareness, and

   (d) an understanding of how academic content relates to their everyday lives.

Numerous colleges have embraced this approach to enhance learning and foster better understanding among students, faculty, and administrative personnel. Social scientists have also utilized role playing in academic settings to tackle both national and international issues.

The foremost advantage of utilizing role play as an educational tool lies in its interactive nature. In conjunction with discussions on theoretical behavioral issues, participants explore various methods of role play and innovative behavioral approaches. Consequently, there is an increased focus on active engagement in the learning process, which enhances educational outcomes. Role play within the classroom establishes a vital link between understanding a concept and applying that knowledge in practice. Merely introducing new material does not effectively address interpersonal challenges in the classroom or foster new social dynamics; such issues are only resolved when students or educators alter their behaviors. Therefore, role play can be regarded as one strategy within an educational framework aimed at systematically enhancing classroom learning and social interactions. This approach posits that learning should take place through real-world experiences. In the classroom setting, concepts are transformed into actions, and theoretical knowledge is applied in practice. It serves as a platform for identifying challenges, gaining practical experience, analyzing information, and drawing conclusions. In contrast, a traditional classroom environment typically relies on a didactic teaching model, where an instructor delivers a lecture to the class, followed by students completing assignments and problem-solving tasks at home. In a flipped classroom, the conventional learning paradigm is inverted. Students are required to engage with educational materials, such as lectures, videos, or readings, online before attending class, which allows them to absorb the content at their own pace. During class time, they participate in active learning exercises, including problem-solving, case studies, and interactive discussions, all facilitated by the instructor. This approach stands in contrast to traditional education, where students typically complete assignments or reinforce their learning independently at home, often without immediate teacher support. In a flipped learning environment, the instructor is available to assist students as they assimilate new knowledge and concepts, thereby enhancing the learning experience.

Type of Innovation in Teaching & Learning Method: Innovative teaching and learning methods include Google Classroom. Objective: Integrating technology into the classroom enables educators to experiment with new teaching methods. Google Classroom is one approach for teachers to save important classroom resources such as lesson plans, notes, audio lessons, videos, and assignment details. This can then be accessible by students from the comfort of their own homes whenever necessary, bringing the classroom back to them with a click of the mouse. Significant Results Observed: Creating a Google Classroom using the Google App. Students are required to become members of the Google Classroom. Notes, assignments, and quiz questions are all available in the app. Students can participate in the quiz by registering via the app sign in and The assessment will be finalized. Students have enhanced their comprehension of concepts while acquiring skills in utilizing online resources pertinent to the subject matter. Additionally, it guarantees that students who miss classes due to illness or other circumstances remain informed at all times. This approach removes the necessity for students to transport heavy textbooks and allows them to engage in learning at their convenience and at their own pace.

Active Learning Strategy The Flipped Classroom is a progressive educational approach. Objective: To motivate students to articulate different concepts from the curriculum as part of their review process. Flipping the classroom has proven to be an effective teaching method. This approach

transforms students into engaged participants in their learning journey by transferring the responsibility of learning to them; educators assume the role of facilitators, while students take charge of acquiring concepts and knowledge. By employing various technological tools, students are encouraged to enhance their understanding, address knowledge gaps, and formulate their own conclusions as necessary. Observed Significance: When employing this method, the onus of learning rests on the students, with teachers fulfilling a supportive role.

Cooperative Learning as an Innovative Teaching and Learning Approach: Collaboration-Centric Learning Objective: To promote student collaboration on various projects. In our globalized society, teamwork is an essential skill necessary for all professions and enterprises. Educators can facilitate the development of this skill in students by providing opportunities for them to learn, study, and collaborate in the classroom. Notable Outcomes Observed: Encourages students to take ownership of their learning, enhances motivation, and cultivates skills in self and peer assessment.

Demonstration Type of Innovation in Teaching and Learning Method: Utilizing working models for demonstration purposes. Objective: To facilitate students' comprehension of engine functionality. Significant Results Observed: Learners exhibit an improved understanding of engine components and can recognize the specific roles of various parts within the system.

Massive Open Online Courses (MOOCs) represent a novel approach to teaching and learning. Objective: To motivate students to participate in online courses relevant to their fields of study through esteemed platforms such as NPTEL, Coursera, EdX, and Udemy. Significance Results: Students gain insights into subjects beyond the standard curriculum from reputable institutions that offer their courses through platforms like SWAYAM, Course Era, and EDX.

Group Discussions as a Method of Innovation in Teaching and Learning: are invited to share their insights. Aim: To enhance students' communication skills.

Other innovative teaching-learning practices include the following:
1. Collaboration and Cooperative Learning
2. Reflective Learning.
3. Uses of ICT Equipment
4. Techno-pedagogy.
5. Workshop & Seminar
6. Simulation.
7. Gamification.
8. Crossover Learning
9. Adoptive Teaching
10. Stealth Assessment

Challenges for Innovative Teaching-Learning Practices
- ❖ Insufficient resources pose a considerable barrier to the adoption of new methodologies. Numerous schools and teacher training institutions are deficient in essential technology and materials.
- ❖ Inadequate training: Educators require comprehensive training to effectively implement new strategies. However, many educational institutions either lack such training or rely on outdated methods. Consequently, regular workshops, seminars, and other training sessions focused on innovative concepts are essential for successful execution.
- ❖ Limited awareness: Innovative teaching methods are frequently neglected. Therefore, raising awareness is crucial to engage students and enhance their learning and skill development.
- ❖ Deficiency in motivation is a critical issue. It is widely recognized that motivation is fundamental to both teaching and learning; thus, it should be fostered extensively.

❖   Insufficient collaboration: Effective learning hinges on collaboration. A lack of teamwork can significantly diminish the quality of both teaching and learning experiences.

❖   Absence of a supportive environment: A supportive atmosphere is vital for the implementation of innovative teaching practices. Factors such as the lack of a library, inadequate classroom arrangements, and unavailability of technological tools can hinder the learning environment, necessitating strategic planning to cultivate a more effective educational setting.

Conclusion: It is focused with the study of various educational challenges and the approaches required to tackle teaching and learning problems in order to achieve the best results. Emerging technologies are continually reshaping the landscape of higher education, offering opportunities for significant reform and revitalization. This study investigates key technologies, including computerized grading systems, electronic textbooks, simulation technologies, gamification, flipped classrooms, active learning environments, MOOCs, collaborative distance learning platforms, and the Active Learning Forum. While existing research indicates that several of these technologies, such as Active Learning Classrooms and Simulation Technology, can enhance student learning and performance, it is important to recognize that many have yet to undergo comprehensive evaluation. As shortcomings are identified and new challenges arise, these technologies will likely require iterative refinement. Additionally, it is essential for educators to receive adequate training and support to effectively implement these modern tools. As these technologies continue to develop, they will inevitably be integrated into higher education to address the global challenges associated with 21st-century learning.

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A REVIEW STUDY ON INNOVATIONS IN EXPERIENTIAL LEARNING FOR TOMORROW'S EDUCATORS

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Abstract

Experiential learning among the teachers could be assessed by the use of assessment methods that are based on performance. It would include lesson planning, exercises related to classroom management and teaching demonstrations. Such an assessment would provide holistic view about the candidate while applying them in the real classroom setting. The students should be able to apply their classroom learning in a practical manner. Research has indicated the incorporation of experiential learning in the teacher's education which would lead to improvement in students' engagement. It is important that the students are actively involved in learning about the real life experience and getting a hands on experience on the activities. In this way the students will be highly motivated and engaged in learning more about the outcomes. Introduction of reflective practices like group discussion and journaling would help the candidates who are in the process of becoming a teacher. Such an experiential learning would help the teachers in extracting valuable insights from the experience which they have and share it with their students. Experiential learning has emerged as pivotal approach which would foster critical thinking, immersive learning experience and fosters practical skills among the students. Integration of the experiential learning into the teacher's education curricula would help in shaping the next generation of the upcoming teachers who are empathetic, equipped and adaptable for meeting diverse needs that exist among the learners.

Keywords: Experiential Learning, Teacher Education, Benefits, Strategies

1. Introduction: Experiential learning is Consider to be a dynamic educational approach which provides and experience of practical learning in the education field. It is said to be a hands-on educational approach which emphasizes on practical experience and active engagement in learning process. It would involve Application of skills and knowledge which is acquired in a classroom to the real world. It fasters more understanding about the concepts and also promote problem solving abilities and critical thinking among the students (Ajani, 2023). It is said to be an immersive method which encourage the educators for the creation of activities and scenarios which would enable the learners to explore where activities and also experiment on experiences with surround them in the environment. The students gain a lot of knowledge while going to school and college but it is also important that they could get an opportunity to apply them in the daily life. It is important for the students to experiment new things and learn new knowledge which comes in their way during the process of moving ahead to the next classes (Dolby & Rahatzad, 2018). This would help them in grasping more about the subject and also would lead to a profound grasp. There are different subjects in schools and colleges and it is very important for the students to learn each one of them so that the knowledge would become widely spread among many people. Experiential learning provides a platform to the students for developing a stronger sense of adaptability, collaboration and autonomy. The students need to be prepared for their career opportunities and it is important that they get ready for a diversified profession (Swennen, 2020). The students should get quality education which is executed by the teachers and the pedagogy is defined by the schools and colleges. The teachers need to follow the instructions which are given to them by their institution. Hence it is necessary that the education should we planned in such a way that all the stakeholders of education could lead to a better

life for them and their family members. The teachers should be educated properly and their skills need to be improved so that they could provide quality education to the students (Chesimet et al, 2016). The education quality when maintained could lead to better teachers and they would have more knowledge of their specialized subject so that they will be able to deliver something specific to different segments to the students. The education system of college is quite different and there are different ways of improving the teaching quality but it is important that the teachers then says also take the responsibility of encouraging the students to choose any one career opportunity. The teachers should have plenty of knowledge so that they could implement the latest education policy in their teachings (Lee, 2019). It is necessary for them evaluate the need of changing the quality of teaching and only than they will be able to deliver their teachings in the best way possible. The teachers could contribute towards better education in the entire nation and this would require them to proceed further with development of a new policy which will lead to an experiential learning among the students. The pedagogical knowledge of the teachers would contribute to a better education system as the students need an experiential learning experience to the students. For achieving better quality in education, it is important that the teachers aim to teach practically to the students (Ajani, 2023). There is a lot of innovation and development in the educational sector. It is very important to focus on better education for the students so that they could get a hands on experience about the way they need to perform in their organization when they will be joining their first job. They needs to be a development of a teaching learning approach which would help in expansion of learning outcomes among the students. In the current education system there is lack of skills required by the big organizations and the students face a lots of issues when they join any such organization in future (Dolby & Rahatzad, 2018). The learning outcomes have been unsatisfactory and the students are unable to perform and gain practical knowledge why learning in their colleges. It is important that the students gain necessary skills and attitude so that they could be able to face any challenges which come in their way when they are working or starting their own business. The students should gain the ability to correlate with the real life scenario and such teachings are necessary to be imbibed in the college where they are studying. Instead of focusing on the traditional approach of learning it is important to adopt practical and modern techniques so that they could learn and implement them in future (Mushahari & Sharma, 2022). Experiential learning is related to learn while doing the things. At the end of such learning experience it is important that the students have gained necessary skills which could be implemented in their jobs.

2. Review of Literature: Suryani & Widyastuti (2015) have discussed in the study that the teachers are currently playing a very important educational role. The current situation demands continuous learning for the students and the teachers. The teachers need to develop themselves so that the students could achieve more in their life. It is important to improve the learning among the students and for this the teachers need to improve their learning methodology so that they are able to promote experiential learning among them. The teachers need not wait for any kind of formal instruction given to them about learning, they should themselves be encouraged to work on practical aspects. They need to be self-directed and autonomous. The teachers make use of the opportunities which they get to learn and they should use their own experience into teaching. Girwan et al (2016) have mentioned in the study about experiential learning during initial stages of professional development among teachers. The teachers need to observe the students in the initial period and this would help in improving their teaching pedagogy and also help the learners to learn more than the traditional ways. The teachers should adapt to the modern techniques. The study explored implementation of an approach with the teachers of Irish

schools and they have indicated their pedagogic changes which have been a part of their curriculum's reform. Various qualities among the teachers could bring long term change among the teachers like interviews, observations and self-reflections. Experiential learning would bring about a systematic change in the students and would help them in better career opportunities in future. Dolby & Rahatzad (2018) indicated about learning program which engages students in partnership with the teachers and children. The author examines mainly few critical roles that are working to foster success of the program. The role supports experiential learning and they consistently need to ensure that the students are successful in all spheres. The learning impacts students' professional and personal growth.

Swennen A. (2020) have mentioned in the study about experiential learning as 'new normal' in teacher's education. Field experience is very important in teacher's education. The teachers should focus on encouraging the students to apply their learning practically. Average fulfilment rate and development trend indicates the difference among four dimensions which suggested the presence of higher and lower order needs. There is an assumption in the study that the teachers of primary school work under high pressure in educational context. Though there is lot of pressure, the teachers focus on complex learning problems and context so that the students learn new things which are practically applicable. Mushahari & Sharma (2022) have in indicated in the study about experiential learning and it indicates learning from the experience which is accompanied by reflection. It cannot be said to be a new concept. There are previous researches which indicated about experiential learning. Due to the awareness about various concepts related to experiential learning is now being considered as very important. For developing skills among human beings, application of theoretical knowledge is very important to be applied in real world scenario. Ajani (2023) have indicated in the study about experiential learning as a theory which is adopted by the teachers for their professional development. It is said to be an effective approach which engages teachers in various classroom-enhanced activities. This would include design or inclusion of various learning activities and would promote teaching skills and pedagogical content among the teachers. Theoretical framework based on experiential learning would enable delivery of effective classroom instructions for learning experience among teachers based on a different context. This study considered teachers who are teaching in the economics department in various schools in Nigeria. The findings of the study revealed that the experiential learning theory has been critical for the professional development of the teachers.

3. Objectives

- To evaluate the importance of experiential learning in teacher education
- To understand the benefits of using experiential learning in teacher education
- To evaluate the challenges and considerations in Implementing Experiential Learning in Teacher Education
- To predict the future of Experiential Learning in Teacher Education

4. Research Methodology: This study is based on secondary data. The secondary information is obtained from various published sources like National and International Journals. The main aim of this study is to predict the future of Experiential Learning in Teacher Education. This study also aims to evaluate the importance of experiential learning in teacher education, understanding the benefits of using experiential learning in teacher education and to evaluate the challenges and considerations in Implementing Experiential Learning in Teacher Education.

5. **Importance of Experiential Learning in Teacher Education**

- **Enhanced Understanding**: Experiential learning would provide the teachers with an experience of the real world and would allow them for gaining deep understanding about educational practices and concepts. Such firsthand knowledge would enhance the ability of the students to connect with real life scenario and adapt a teaching method for the learning styles of individuals (Ajani, 2023).

- **Development of Practical Skills:** With the help of experiential learning, the educators could get equipped with certain practical teaching skills which could not be developed with the help of traditional academic setting. This would make them learn about the challenges which they face in real classroom and also incorporate latest technologies, and also create engagement of learning experiences among students (Swennen, 2020).

- **Promotion of Reflective Practice**: Engagement of experience learning would encouraged the teachers to reflect their own experience is the able to analyse their teaching methods and would lead to continuous improvement in the instructional approach. This would reflect in a practice which is very important for professional development and would enhance the educational qualities which is being provided in various Institutes (Akengin & Aydemir, 2012).

- **Integration of Theory and Practice**: Experiential learning would help in bring the gap between the knowledge which is acquired in the Institutions and the application of such knowledge in the real life scenario. There is a need for the students to learn how they could implement whatever they have learnt in their classroom teaching in a practical manner when they appear on the field. It would enable the educators to apply there in educational contact which would result in teaching practices which are much more effective than the traditional ways (Chesimet et al, 2016).

- **Positive Impact on Student Learning**: It would make the teachers undergo an experiential learning and will help them in getting equipped for engagement and inspiring of students which they are teaching currently. This approach would help in creation of stimulating and dynamic learning environment which would help in improvement of Holistic development and academic performance amongst the learners (Lee, 2019).

Benefits of using experiential learning in teacher education

- **Enhanced Learning**: It would engage the teachers in gaming hands on experience and theories in the real life scenarios. It is important for the students to understand the way the real world is at present and would help them in making decisions for the near future in an effective manner. Such a practical approach would help them in understanding more problem solving situations and would help them in retaining the knowledge (Akengin & Aydemir, 2012).

- **Improved problem-solving skills**: Experiential learning would help the educators in development of critical thinking ability and creative abilities among the students so that they could easily address the challenges in an effective manner which they would face in that educational career.

- **Enhanced empathy and understanding**: through an experience of classroom scenarios and teaching methods the educators could easily gain MP3 among the students and this would increase the understanding of learning needs of the individuals in the classroom (Pittman & Dorel, 2014).

- **Enhanced collaboration**: with the help of collaborative experience for the learners the teachers could try to communicate in a proper manner and could improve communication skills and teamwork among the students and this would further lead to a better professional teaching community which is more supportive.

Examples of Experiential Learning Activities for Teacher Education

- **Outdoor classroom** - It is one such example which could help in utilization of outdoor spaces in the form of learning environment which could provide the teachers a hands on experience for the development of new methods of teaching and could connect their lessons to the real world. This could include activities like outdoor science experiment, ecological observation and nature walks (Thaba & Kanjere, 2014).

- **Collaborative Projects** - such projects could help the teachers in moving ahead with Cooperative planning decision making and problem solving. It is very important that the students learn a better way so that they could serve the problems which might come in their future. Such a technique could include organization of research projects, joint curriculum development and cooperative lesson plan (Mushahari & Sharma, 2022).

- **Simulated Classroom Scenarios** - In such a scenario the teachers could create a simulated classroom which could present the current scenarios with the students might have faced or good face in their future. The teachers can help the students in interacting more about the challenges which might come in their way and also provide them with a proper classroom management practice. Such a practice could be conducted in environment which is controlled in every form and this would help them to develop their confidence and equally developed decision making skill (Akengin & Aydemir, 2012).

- **Reflective Journaling** - It could be referred to as another technique which could help the teachers in documenting their experience is identification of challenges and also reflect their personal growth. Such an activity could lead to continuous improvement critical thinking and would Foster self-awareness (Dolby & Rahatzad, 2018).

Challenges and Considerations in Implementing Experiential Learning in Teacher Education

- Implementation of experiential learning in Programs which are based on teachers' education having certain considerations and challenges where the teachers need to be carefully attended. There is also requirement to improve the infrastructure so as to support the experiential learning activities among the students. This would include access towards the tools which are necessary spaces and materials where in the real world would be experienced by students (Mushahari & Sharma, 2022).

- Additionally, it would ensure an alignment of the experiential activities having curriculum requirements and educational standards which might pose significant challenge. Educators require to maintain balance between academic benchmarks and hands-on experiences, which needs thoughtful coordination and planning (Chesimet et al, 2016).

- Furthermore, it is quite difficult for the educational institutions to leave their traditional way of teaching and move towards the experience learning approach which would include changing the existing practices and norms. Any kind of change which would help in betterment should be accepted and changes should be made in the practices and norms accordingly. There is a need to improve the professional development and effective communication skills among the youth (Dolby & Rahatzad, 2018).

- Consideration is important to be associated with equity, inclusion and diversity which should be integrated into an experiential learning initiative for ensuring that all students get equal opportunities and access towards an experience which is meaningful. This would involve addressing of potential barriers for participation and creating inclusive and supportive learning environment (Ajani, 2023).
- Addressing considerations and challenges is quite crucial for successful implementation of experiential learning in the education of teachers and this would contribute towards enhancing professional development and learning experience among future educators.

Strategies for Incorporating Experiential Learning into Teacher Education Programs

- **Project-Based Learning** - It is said to be an effective strategy to incorporate experiential learning into programs which are based on teachers education with the help of project-based learning. Such an approach would involve designing of projects based on real world and hands on activities which would enable the students for applying of learning in the authentic contexts. It will allow the future educators for development of problem solving ability, adaptability and critical thinking skill. This would help in creation of meaningful project which could mirror the challenges the students could face in their future (Akengin & Aydemir, 2012).
- **Simulations and Role-Playing** - it is said to be another strategy which helps in using role play exercises and simulations for immersion of aspiration among teachers in the realistic scenarios. Such activities would provide a firsthand experience for management of classroom dynamics, addressing needs of students and also handling the unexpected situations. With the help of role plays, the students to understand the way conflicts could be resolved, how they would gain an insight into an effective communication and also build rapport among the students. The teachers prepare themselves in facing complexities associated with real classroom environment (Chesimet et al, 2016).
- **Service-Learning Initiatives** - Such an initiative into the education of teachers would be a very powerful technique to connect community engagement with experiential learning. Through the participation of teachers in different projects the teachers could develop understanding about the social issues, cultural competence, social responsibility and this would also cultivate empathy among them. This would lead to engagement of teachers in service-learning experiences which would enable the students to build a relationship which is meaningful and promotes a holistic development. This would also establish a purposeful meaning in the teaching practice (Dolby & Rahatzad, 2018).

Assessment and Evaluation of Experiential Learning in Teacher Education

- **Performance-Based Assessment** - Experiential learning among the teachers could be assessed by the use of assessment methods that are based on performance. It would include lesson planning, exercises related to classroom management and teaching demonstrations. Such an assessment would provide holistic view about the candidate while applying them in the real classroom setting. The students should be able to apply their classroom learning in a practical manner (Chesimet et al, 2016).
- **Reflection and Self-Evaluation** - Teachers are encouraging the students to engage themselves in reflective practices that will help them in having hands on experience. Self-evaluation would fosters metacognitive skills and critical thinking, also would help the future educators to

identify areas of improvement and recognition of their development as a teaching professional (Dolby & Rahatzad, 2018).

- **Peer and Mentor Feedback** - Incorporation of a feedback system which is based on pure and mentor would provide information about the teachers from the perspective of the candidates based on their learning experience till now in the institute. Such a feedback would encourage generation of ideas and with also help the mental to understand the experience of the learners about the valuable insights with the teachers have given about the improvement and growth (Pittman & Dorel, 2014).

- **Portfolio Assessment** - It would help in building comprehensive portfolio related to experiential learning experience which would allow the teachers and candidates to understand the scope of development and growth. Portfolios could include reflective journals, lesson plans, student work sample and classroom observation report, these would offer holistic view about the progress of the aspiring educators (Thaba & Kanjere, 2014).

Research and evidence supporting the effectiveness of experiential learning in Teacher Education

- **Improved Student Engagement** - Research has indicated the incorporation of experiential learning in the teacher's education which would lead to improvement in students' engagement. It is important that the students are actively involved in learning about the real life experience and getting a hands on experience on the activities. In this way the students will be highly motivated and engaged in learning more about the outcomes (Dolby & Rahatzad, 2018).

- **Enhanced Critical Thinking Skills** - It is important for the students to have better thinking skills so that they will be able to demonstrate experiential learning and this would enhance critical thinking skill among the students when they will be exposed to the real world challenges and problems. The teachers should integrate experiential learning methods which could help the students in development of critical thinking ability and also help them in solving problems in and effective manner (Mushahari & Sharma, 2022).

- **Long-Term Knowledge Retention** - such evidences suggest that the experiential learning result in knowledge retention for a long-term. When the students get actively involved in gaining experience from the real time world will help them in a better learning about the real facts which are currently present in the environment. They will be able to apply the information which the gather from the institute over handling of various challenges and situations which they have never face before. This would help the students in mastering on problem solving and getting a deeper understanding about the real situations of the world (Akengin & Aydemir, 2012).

Recommendations for integrating Experiential Learning in Teacher Education Curriculum

1) **Incorporate real-world experiences** - The educators should aim to overview the opportunities which would connect classroom teaching with the real world experience like guest lectures, field trips and other service projects (Pittman & Dorel, 2014).

2) **Collaboration with community partners** - Establish partnership with the local organization and businesses or community members would help in creating and authentic learning experience for the candidates were interested in becoming a faculty member. Such a collaboration would provide more learning opportunities and will be valuable in future (Chesimet et al, 2016).

3) **Reflective practices** - Introduction of reflective practices like group discussion and journaling would help the candidates who are in the process of becoming a teacher. Such an experiential learning would help the teachers in extracting valuable insights from the experience which they have and share it with their students (Dolby & Rahatzad, 2018).

4) **Integration of technology** - Utilization of technology resources and tools for enhancing experiential learning like case studies, virtual simulations, digital portfolios to document their learning experiences (Ajani, 2023).

The Future of Experiential Learning in Teacher Education: The educational landscape is said to be ever evolving. Experiential learning hold great promises for the teacher education programme. And educator needs to seek effective and innovative teaching methodology (Swennen, 2020). Experiential learning has emerged as pivotal approach which would foster critical thinking, immersive learning experience and fosters practical skills among the students. Integration of the experiential learning into the teacher's education curricula would help in shaping the next generation of the upcoming teachers who are empathetic, equipped and adaptable for meeting diverse needs that exist among the learners (Chesimet et al, 2016). Furthermore, experiential learning in future in teacher's education encompass utilization of technology for enhancement of immersive experiences Development of collaborative and interdisciplinary learning opportunity and exploring global perspectives through an international experiential initiative (Lee, 2019). As education landscape would continue evolving, integration of experiential learning towards teacher education can be anticipated to be at forefront of the pedagogical advancements and would pave its way towards a more impactful and dynamic and impactful educational journey for students and educators alike (Girwan et al, 2016).

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UNDERSTANDING THE CHALLENGES AND OPPORTUNITIES IN DIGITAL EDUCATION

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Abstract

In recent years, digital education has transformed the landscape of learning. The COVID-19 pandemic accelerated the shift towards online platforms, making education more accessible while also revealing significant challenges. This article explores the various challenges and opportunities presented by digital education, examining technological, pedagogical, and socio-economic factors that influence its effectiveness. By analyzing these elements, we can better understand how to harness the potential of digital education while addressing its limitations. This paper discusses increased accessibility, enhanced engagement, personalized learning, the digital divide, and the necessity for teacher training. The future of digital education is promising, with emerging technologies and hybrid learning models offering more effective educational environments. However, concerted efforts are needed to ensure equitable access and quality education for all learners.

Keywords: *Digital Education, Online Learning, Accessibility, Student Engagement, Teacher Training, Emerging Technologies.*

➢   **Introduction:** Digital education, encompassing online learning platforms, virtual classrooms, and educational applications, has become an integral part of the educational landscape. This shift has been particularly pronounced in recent years, fueled by advancements in technology and the urgent need for innovative solutions to educational challenges (Hodges et al., 2020). The COVID-19 pandemic acted as a significant catalyst, prompting institutions worldwide to adopt online learning methodologies almost overnight. While digital education offers numerous opportunities for enhanced accessibility and engagement, it also presents considerable challenges that need to be addressed. This article aims to provide a comprehensive overview of the challenges and opportunities in digital education, focusing on its impact on learners, educators, and educational institutions. By examining the evolution of digital education, we can better understand its current state and potential future developments.

•   **Definition of Digital Education:** Digital education refers to the use of digital technology and tools to facilitate teaching and learning processes. It encompasses a wide range of instructional methods and resources that leverage digital devices, online platforms, and interactive multimedia content.

•   **Components of digital education**

  i.   **Online Learning**: Courses and educational programs delivered via the internet, allowing students to learn remotely at their own pace.

 ii.   **E-Learning Tools**: Software and applications that support learning, such as Learning Management Systems (LMS), virtual classrooms, and educational apps.

iii.   **Multimedia Content**: The use of videos, simulations, and interactive activities to enhance understanding and engagement.

iv.   **Blended Learning**: A combination of traditional face-to-face instruction and online learning, providing a more flexible approach to education.

v.   **Access to Resources**: The availability of digital libraries, open educational resources, and online databases, enabling learners to access a wealth of information.

vi. **Collaborative Learning**: The use of digital platforms to facilitate group work, discussions, and projects among students, regardless of their physical location.

➢ **The Rise of Digital Education**

- **Historical Context**

Education has traditionally relied on face-to-face interactions within physical classrooms. However, the emergence of distance education began in the late 20th century, with correspondence courses and the advent of educational television (Moore & Kearsley, 2012). The internet fundamentally changed how education is delivered, allowing for more dynamic and flexible learning experiences. Online courses began gaining traction in the late 1990s and early 2000s, enabling students to access educational materials and engage in discussions from anywhere in the world (Allen & Seaman, 2017).

- **The COVID-19 Pandemic as a Catalyst**

The COVID-19 pandemic served as a significant turning point for digital education. As schools and universities closed their doors to prevent the spread of the virus, educators and students were forced to adapt quickly to online learning environments (Kizilcec et al., 2020). Platforms such as **Zoom, Google Classroom, and Microsoft Teams** became ubiquitous in education, enabling remote learning at an unprecedented scale. This transition exposed the potential of digital education while also highlighting existing gaps in technology access and teacher preparedness.

➢ **Challenges in Digital Education**

☞ **Digital Divide**
- Many students lack access to technology and reliable internet, especially in rural or low-income areas.
- Disparity limits opportunities for disadvantaged students and exacerbates existing education inequalities.
- Bridging the digital divide requires collaboration among governments, educational institutions, and community organizations.

☞ **Quality of Education**
- The quality of digital education can vary significantly, with some online courses lacking rigorous standards or effective teaching practices.
- Difficulty in ensuring academic integrity due to cheating and plagiarism.
- Educational institutions must establish clear guidelines and quality assurance processes to maintain the credibility of online learning.

☞ **Student Engagement and Motivation**
- Ensuring student engagement in a virtual classroom can be a challenging task.
- Lack of face-to-face interaction can lead to feelings of isolation and disconnection.
- Educators face challenges in implementing active learning strategies like discussions, group work, and multimedia content to increase engagement.
- Difficulty understanding motivational factors for sustained participation and success.

☞ **Teacher Training and Preparedness**
- Many educators lack digital pedagogy training.
- Gap in skills hinders online instruction effectiveness.

- ▪ Implementation of professional development programs for digital tools and teaching strategies is a challenge that requires ensuring equal access for all teachers.

➢ **Opportunities in Digital Education**

- ❖ Digital education provides students in remote or underserved areas with access to high-quality educational resources that were previously unavailable.
- ❖ Learners can customize their study schedules, enabling them to balance their education with other responsibilities like work or family obligations.
- ❖ The learning experience is enhanced by a diverse range of online materials, such as e-books, videos, and interactive modules.
- ❖ Digital education utilizes interactive tools like online quizzes and polls to actively engage students in the learning process.
- ❖ Multimedia formats like videos, podcasts, and animations help cater to diverse learning preferences and maintain student interest.
- ❖ Digital platforms enable students to collaborate through group projects and discussions, regardless of their geographical location.
- ❖ Digital education enables personalized learning experiences that cater to the unique needs and preferences of each student.
- ❖ Technologies utilize data analytics to assess a student's progress and adjust the curriculum in real time, ensuring a customized learning experience.
- ❖ Learners have the freedom to select their own educational paths that align with their interests and career aspirations.
- ❖ Digital education facilitates international connections between students and educators, fostering a global sense of community.
- ❖ Virtual exchange programs and online collaborative projects facilitate teamwork and collaboration among students from different countries.

➢ **The Future of Digital Education**

- • **Emerging Technologies**

    The future of digital education will be shaped by emerging technologies.

  a. Artificial intelligence (AI) and machine learning can provide personalized learning experiences by analyzing student data and predicting learning outcomes.

  b. Virtual reality (VR) and augmented reality (AR) offer immersive learning experiences, enabling students to explore complex concepts in engaging ways.

  c. Blockchain technology has the potential to revolutionize credentialing and assessment, providing secure and verifiable records of student achievements.

- • **Hybrid Learning Models**

  a. Hybrid learning models that combine in-person and online instruction are gaining popularity.

  b. Blended approach allows for greater flexibility while maintaining the benefits of face-to-face interaction.

  c. Successful implementations of hybrid learning demonstrate the potential for enhanced engagement and personalized learning experiences, catering to diverse student needs.

- • **Policy and Institutional Support**

    Government policies play a crucial role in supporting digital education initiatives.

a. Policymakers should allocate funds for technology infrastructure, educator professional development, and digital divide-bridging programs.

b. Educational institutions should collaborate with technology providers to improve digital resources and support systems.

c. The creation of an equitable and effective digital education landscape requires a collective effort from all stakeholders.

Conclusion: Finally, Digital education presents a unique blend of challenges and opportunities that can reshape the future of learning. While the potential for increased accessibility, engagement, and personalization is significant, addressing issues such as the digital divide, quality of education, and teacher preparedness is essential. The transformation of education requires innovative solutions that leverage technology while ensuring that all learners have equal access to resources and opportunities. To fully realize the benefits of digital education, collaboration among stakeholders is paramount. Governments, educational institutions, and communities must work together to create a supportive environment for both learners and educators. This includes investing in infrastructure, providing professional development, and fostering inclusive policies that address disparities in access. As we look to the future, it is clear that digital education will continue to evolve, driven by emerging technologies and innovative teaching methods. By embracing these changes and addressing the challenges, we can create a more equitable and effective educational landscape that prepares learners for success in an increasingly digital world.

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SIGNIFICANCE OF DIGITAL TOOLS AND TECHNIQUES IN TEACHING

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Abstract

The integration of digital tools and techniques in teaching has significantly transformed the educational landscape, enhancing both teaching practices and student learning experiences. This paper examines the importance of these tools in modern education, focusing on how they promote accessibility, interactivity, and personalized learning. From Learning Management Systems (LMS) to artificial intelligence (AI), virtual reality (VR), and collaborative platforms, digital technologies have expanded the scope of traditional teaching methodologies. They enable educators to create more engaging, flexible, and data-driven learning environments. However, the adoption of digital tools also presents challenges, including the digital divide, teacher readiness, and privacy concerns. Despite these challenges, the continued evolution of digital tools offers vast potential for innovative pedagogical strategies, reshaping the future of teaching and learning in a digitally connected world.

Key words: Digital tools and techniques, Learning management systems, Artificial intelligence, Virtual reality, Educational software, Social learning platform.

Introduction: In recent years, the integration of digital tools and techniques into teaching has transformed the educational landscape, reshaping how knowledge is imparted and acquired. Traditional teaching methods, often characterized by a teacher-centered approach and limited technological resources, are being supplemented or replaced by digital solutions that foster interactive, student-centered learning environments. The proliferation of digital technologies such as Learning Management Systems (LMS), multimedia resources, and artificial intelligence (AI) has not only enhanced teaching methodologies but has also improved accessibility, engagement, and personalization of education. Digital tools enable educators to diversify their teaching strategies, making it easier to cater to different learning styles and needs. Whether through interactive simulations, virtual classrooms, or online collaborative platforms, technology provides opportunities to create immersive and engaging learning experiences. These tools also facilitate real-time feedback, adaptive learning, and self-paced study, making education more flexible and student-driven. Additionally, the global adoption of these tools has allowed teaching to extend beyond the physical classroom, reaching students from diverse geographical locations and socio-economic backgrounds. Moreover, the COVID-19 pandemic has accelerated the adoption of digital tools in teaching, demonstrating their critical role in maintaining educational continuity during crises. However, while these tools present numerous benefits, they also pose challenges, such as the digital divide and the need for adequate teacher training. Nevertheless, the significance of digital tools and techniques in teaching is undeniable, as they are increasingly integral to the future of education in a technologically advanced world. This shift emphasizes not only the importance of incorporating technology into teaching practices but also the need for ongoing innovation to improve learning outcomes and ensure equitable access to quality education.

Meaning

Digital tools and techniques in teaching refer to the use of technology-based resources and methods that enhance, facilitate, or transform the teaching and learning process. These tools encompass software, hardware, and internet-based platforms that allow educators to deliver instruction more effectively, engage students, and personalize the learning experience. They represent a shift from

traditional teaching methods, such as lectures and textbooks, to more interactive, flexible, and accessible forms of education.

A. Digital Tools in Teaching

Digital tools are various types of technology that assist educators in delivering educational content, interacting with students, and managing classroom activities. These include:

- Learning Management Systems (LMS):Platforms like Google Classroom, Moodle, or Blackboard that organize educational content, assignments, quizzes, and grading. These systems help teachers manage course materials and track student progress.
- Multimedia Tools: The use of video, audio, and interactive content such as podcasts, YouTube videos, or PowerPoint presentations to make lessons more dynamic and engaging.
- Educational Apps and Software: Tools like Kahoot, Quizlet, and Duolingo help create interactive and gamified learning experiences, allowing students to learn through play and active participation.
- Virtual and Augmented Reality (VR/AR): These tools provide immersive experiences, such as virtual field trips or 3D modeling, which help students understand complex concepts by experiencing them in an interactive, visual format.
- AI-Powered Tools: Artificial intelligence tools like chatbots or adaptive learning platforms that provide personalized learning experiences, catering to each student's pace and understanding.
- Collaboration Tools: Platforms such as Google Docs, Microsoft Teams, or Zoom enable real-time collaboration between students and teachers, even in remote or hybrid learning settings.

2. Digital Techniques in Teaching

Digital techniques refer to the methods and approaches teachers use to integrate digital tools into their teaching practices to optimize learning outcomes. These techniques include:

- Flipped Classroom Model: A teaching technique where traditional instruction is reversed. Students learn new content at home (via videos, readings, etc.) and apply their knowledge in the classroom through discussions or problem-solving activities.
- Blended Learning : A combination of traditional classroom instruction with online digital tools, where students might attend part of their lessons in person and complete other portions through online platforms.
- Gamification: Incorporating game-like elements (e.g., points, badges, leaderboards) into the learning process to increase student motivation and engagement.
- Personalized Learning: Using digital platforms and AI algorithms to create individualized learning paths based on each student's learning style, progress, and needs.
- Real-time Feedback and Assessment: Digital quizzes, polls, and assessment tools that allow teachers to give immediate feedback to students, helping them correct mistakes and reinforce learning on the spot.
- Project-Based Learning (PBL) with Technology: A technique where students use digital tools to research, collaborate, and present their findings, focusing on hands-on projects that involve real-world problem-solving.

Digital tools and techniques in teaching refer to the use of electronic devices, applications, software, and internet-based resources to enhance the teaching and learning process. These tools allow educators to create, manage, deliver, and assess instructional content more efficiently and in a way that engages

students in various learning activities. They help in fostering interactive, collaborative, and personalized learning experiences that go beyond traditional methods.

Definitions

Digital tools and techniques in teaching refer to the various technologies, applications, and methodologies used to enhance the educational experience. Several experts have defined and elaborated on the concept:

1. **Tony Bates (2020):**

   Tony Bates, a renowned expert in educational technology, defines digital tools in teaching as "technologies and applications that support and enhance teaching and learning processes." He emphasizes that digital tools include Learning Management Systems (LMS), multimedia resources, and online communication platforms, which allow educators to deliver instruction, assess student performance, and provide feedback in more efficient ways. Bates also notes that the use of these tools should align with sound pedagogical principles to ensure they benefit the learner.

   Source: Bates, A. W. (2020). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*.

2. **Neil Selwyn (2016):**

   Neil Selwyn, a critical voice in the field of digital education, explains that digital tools and techniques represent the "intersection of digital technologies and educational practices that aim to improve learning outcomes." He discusses how these tools, such as interactive software, online assessments, and digital collaboration platforms , are used to create new ways of learning that were not possible in traditional settings. However, Selwyn cautions that the successful use of digital tools in teaching depends on a clear understanding of their pedagogical value.

   Source: Selwyn, N. (2016). *Education and Technology: Key Issues and Debates*.

3. **Diana Laurillard (2012):**

   Diana Laurillard, a leading expert in the field of digital learning, defines digital techniques as "methods and strategies that incorporate technology to facilitate learning and instruction." According to Laurillard, digital techniques can range from blended learning models, flipped classrooms, to gamification and adaptive learning technologies. She highlights that digital techniques are not merely about using technology but about leveraging it to support active learning, collaboration, and personalized educational experiences.

   Source: Laurillard, D. (2012). *Teaching as a Design Science: Building Pedagogical Patterns for Learning and Technology*.

Key Points from Expert Definitions:

- ✓ Digital tools are diverse technologies (LMS, multimedia, apps) that aid the teaching and learning process.
- ✓ Digital techniques refer to strategies like flipped classrooms, gamification, and adaptive learning to enhance educational engagement.
- ✓ Successful integration of these tools requires a strong pedagogical foundation.
- ✓ The focus is on improving accessibility, customization, engagement, and collaboration in the learning environment.

These definitions reflect the consensus that while digital tools enhance education, their effectiveness relies on thoughtful, pedagogically-sound implementation.

Views:

The integration of digital tools and techniques into education has revolutionized the teaching and learning landscape. Experts from various fields have expressed their views on the transformative potential of these technologies.

- **Sir Ken Robinson**, a renowned education expert, emphasizes the importance of creativity in education. He believes that digital tools can foster creativity and inspire students to think differently.

- **Seymour Papert**, a pioneer in educational technology, advocated for a "constructionist" approach to learning, where students actively construct their own knowledge. He saw digital tools as powerful tools for exploration and discovery.

- **Howard Gardner**, the creator of Multiple Intelligences Theory, suggests that digital tools can help students learn in ways that align with their individual strengths. He believes that technology can provide opportunities for personalized and differentiated learning.

- **Cathy Davidson,** a digital humanities scholar, argues that digital tools can help students develop critical thinking and communication skills. She believes that technology can foster a more collaborative and interdisciplinary approach to learning.

- **Sugata Mitra,** a leading proponent of "hole-in-the-wall" computing, believes that children are naturally curious and capable of learning independently. He argues that digital tools can empower students to take control of their own learning.

Overall, experts agree that digital tools and techniques can:

Enhance student engagement: Digital tools can make learning more interactive and engaging, capturing students' attention and motivating them to learn.

Personalize learning: Technology can allow teachers to tailor instruction to the individual needs and interests of students.

Promote collaboration: Digital tools can facilitate collaboration among students and teachers, fostering a more social and interactive learning environment.

Expand access to education: Technology can break down barriers to education by providing access to resources and opportunities that may not be available in traditional classrooms.

While the potential benefits of digital tools are significant, it is important to note that they should be used in conjunction with effective teaching practices and pedagogical approaches. Teachers need to be equipped with the skills and knowledge to integrate technology effectively into their classrooms.

Reviews of related Literature:

Khare et al. (2007) surveyed to study the pattern of internet use of PhD scholars of Dr H.S. Gour University, Sagar, Madhya Pradesh. The objectives of the study were to know the purposes of using the internet by research scholars, ascertain the knowledge of users about the internet resources, identify the popular search engines and suggest ways of providing better internet services to users. The sample for the study comprised of 100 Ph. D scholars with l0 scholars from each of the ten faculties. It was shown from the study that only 66% of research scholars use the internet for educational, job search, entertainment, communication and business purposes. The study reported that research scholars face technical problems, language-related problems and network-related problems in using the internet.

Ansari and Jilani (2008) conducted a study among the students of the Delhi University, intending to find out the gender ratio among internet users, most frequently used search engines by the students, purposes and problems faced by the students while using internet services and views of the students

regarding the replacement of library by the internet in the future. Researchers analyzed 100 questionnaires and the 25 respondents comprised undergraduates (32%), postgraduates (62%) and research scholars (6%). The study reported that most internet users use the internet for 1-2 hours daily and Internet explorer was the most widely used browser.

Biradar and Kumar (2008) investigated the searching behaviour and the internet use of search engines for retrieval of scholarly information of students and faculties in the university. The study was conducted among the students and faculty of Kuvempu University, Shimoga. The equal number of students and faculties in equal proportion from science and social science departments were selected for the study. Out of 120 questionnaires distributed for the survey, only 100 users filled and returned the questionnaire. The study reported that 96% of faculties and 76% of students used the internet for various purposes and considered the information available on the internet as a great asset and their professional competence were improved with internet resources and they were abreast with the latest information.

Area (2010) explored the reasons to offer information and digital competency training in higher education. The researcher concluded that universities are responsible to offer citizens a higher education, which along with other goals, trains them to become competent individuals to face up to the complex challenges of culture, knowledge, science, economics and social relations in the 21st century. Thus, it became an essential competency for both students and university teaching staff, to know the ways of expression in these new ranges of languages. The incorporation of ICTs into university teaching calls for both students and teaching staff to have a profound mastery of - and competencies in handling – Learning Management System (LMS) tools, and similar other resources that construct "Web 2.0".

Recent development in Digital Education during and after the COVID-19:

Tanya Chatwal. Digitalization of Higher Education in India: A Boom Or A Bane. Res. J. Humanities and Social Sciences. (2019); 10(4): 1083-1088. DOI: 10.5958/2321-5828.2019.00178.5 The basic challenges in the higher education system in India are resistance to change, motivation levels of students, technical skills of students, students' understanding of technology, student performance evaluation etc. Therefore, a contemporary way of imparting education is needed to manage such transformation arising as a consequence of the creation of a huge amount of information in a systematic manner. Through this research paper, an attempt has been made to understand the upcoming trends in the digital education system in India that will give shape to the future of our coming generations for the betterment. Moreover, most internal processes regarding digitalization might be recognised as top-down initiatives and most likely administration-led rather than influenced by academic staff. Digital Education can be defined as the usage of a combination of technology, digital content and instructions in the education system to make things more effective and efficient than the former traditional education system in place. In summary, previous studies demonstrate that even if there are some exceptions with individual enthusiasts who are proponents of educational technology among academic staff, they have provided limited impact on the overall approaches that address digitalization for teaching and learning.

Benavides, Lina M.C. et al. (2020), Digital Transformation in Higher Education Institutions: A Systematic Literature Review. Sensors. 20. 3291. 10.3390/s20113291. Higher education institutions (HEIs) have been permeated by the technological advancement that the Industrial Revolution 4.0 brings with it, and forces institutions to deal with a digital transformation in all dimensions. The objective of this paper is to summarize the distinctive characteristics of the digital transformation (DT) implementation process that has taken place in HEIs. The main findings show that it is indeed an

emerging field, none of the found DT in HEI proposals has been developed in a holistic dimension. This situation calls for further research efforts on how HEIs can understand DT and face the current requirements that the fourth industrial revolution forced. The Kitchenham protocol was conducted by authors to answer the research 64 questions and selection criteria to retrieve the eligible papers. Applying the approaches of digital transformation to the HEI domain is an emerging field that has aroused interest during the recent past, as they allow us to describe the complex relationships between actors in a technologically supported education domain.

Benavides, L. et al., (2020), Higher education institutions (HEIs) have been permeated by the technological advancement that the Industrial Revolution 4.0 brings with it, and forces institutions to deal with a digital transformation in all dimensions. Applying the approaches of digital transformation to the HEI domain is an emerging field that has aroused interest during the recent past, as they allow us to describe the complex relationships between actors in a technologically supported education domain. The objective of this paper is to summarize the distinctive characteristics of the digital transformation (DT) implementation process that has taken place in HEIs. The Kitchenham protocol was conducted by authors to answer the research questions and selection criteria to retrieve the eligible papers. Nineteen papers (1980–2019) were identified in the literature as relevant and consequently analyzed in detail. The main findings show that it is indeed an emerging field, none of the found DT in HEI proposals has been developed in a holistic dimension. This situation calls for further research efforts on how HEIs can understand DT and face the current requirements that the fourth industrial revolution forced.

Devi, G. & Sornapudi, Sirisha. (2020), this paper aims to identify infrastructure facilities used by the students for digital education as well as to find out the significant difference in knowledge and skills of various online tools before and after lockdown. Study Design: Exploratory design. Place and Duration of Study: Students from the government, aided colleges, and state agriculture universities in Andhra Pradesh and Telangana were administered the questionnaire in May 2020. Methodology: A total of 315 students (age range under 20-40 years) actively participating in online classes were chosen. During the lockdown, students were actively participating in the online classes, which could be gleaned from their knowledge of various apps. There was a significant difference in the students' usage of various applications before and after lockdown. Although most students (90.48%) were aware of online education, only 30.79% were enrolled in online classes before lockdown. Students reported an increase in the amount spent on internet connectivity per month (50%), increased usage of data (70%), and 65 increased recharge amount (46%). Since the overall mobile data usage of the students has greatly increased, consequently the amount spent on the internet also has increased after lockdown.

Naik, G. L. et al, (2020), The COVID-19 pandemic has generated a worldwide consciousness that the present way of lifestyle does not work. Many areas need revolutionary changes and it has become obvious, one among them is the educational sector. In India, educational institutes/universities remain closed since the mid of March-2020, because of the fast spread of COVID-19. The emergency lockdown has a preventive measure that upended the life of students, parents and teachers. To combat this inevitable crisis educational sectors started conducting online classes. The sudden changeover in the teaching/learning method has raised new challenges and opportunities. In this study, the results and analysis indicated that lack of facilities, infrastructure, technical tools and internet access is the major drawback for conducting online sessions. The analysis of collected responses confirms that the traditional chalk and talk methodology is often better than online sessions. In this study, a survey based

investigation has been carried out to analyse the efficacy of online teaching and learning method compared to the traditional teaching method. A questionnaire-based survey is prepared to collect the data from different degree students, faculties and parents with the general public. The suggestions and recommendations are provided to improve the current online teaching methods to outreach many students and improve the quality of the teaching/learning experience. A total of 874 responses were gathered from people of different backgrounds who participated in the survey.

Bast, F. (2021), India is the second-most populous country in the world. There had been a tremendous shift towards online learning through the Indian Government's digital initiatives in general, and during COVID-19 lockdown in particular. An online self-report survey (n = 1,318) was conducted to assess students' perception of online learning in this changed situation in comparison with traditional classroom learning. The study's receptive towards online learning was significantly higher for students from urban areas compared with rural areas. Possible reasons for these results are discussed, impediments to students' motivation with digital education are identified and the findings are contextualized in a broader perspective. Results revealed several exciting facets of students' perceptions. The study analysed eight independent variables on 66 students' perception towards online learning, viz., gender, nature of the settlement, economic background, religiosity, primary electronic device, technology receptiveness, age, and educational institution, with each of these variables forming respective research hypotheses.

Muthuprasad, T. et al, (2021), Educational institutes across the world have closed due to the COVID-19 pandemic jeopardizing the academic calendars. Most educational institutes have shifted to online learning platforms to keep academic activities going. However, the questions about the preparedness, designing and effectiveness of e learning are still not clearly understood, particularly for a developing country like India, where the technical constraints like suitability of devices and bandwidth availability pose a serious challenge. In this study, researchers focus on understanding Agricultural Student's perception and preference towards online learning through an online survey of 307 students. They also explored the student's preferences for various attributes of online classes, which will be helpful to design an effective online learning environment. The majority of the students preferred to use a smartphone for online learning. The results indicated that the majority of the respondents (70%) are ready to opt for online classes to manage the curriculum during this pandemic. Using content analysis, we found that students prefer recorded classes with quizzes at the end of each class to improve the effectiveness of learning.

Tilak, J. B. G. (2021), This article briefly reviews the devastating impact of COVID 19 on the education sector in India. Focusing on school education, it also critically examines how effective online learning, the only major way adopted during the pandemic, has been in the delivery of education and whether it is a reliable alternative method of teaching and learning in India. It also briefly outlines a few important strategies required for the recovery of loss incurred and to face emerging challenges in education in India.

Types

Digital tools and techniques have revolutionized the way we teach and learn. They provide educators with a vast array of resources to enhance engagement, personalize instruction, and improve student outcomes. Here are some of the most common types:

1. Learning Management Systems (LMS):

Examples: Moodle, Canvas, Blackboard

Features: Course management, assignment submission, grading, communication tools, and online resources.

2. Interactive Whiteboards:

Examples: SMART Board, Promethean Board

Features: Interactive presentations, annotation, multimedia integration, and collaborative learning.

3. Educational Apps and Software:

Examples: Khan Academy, Duolingo, Minecraft Education Edition

Features: Gamified learning, self-paced instruction, and subject-specific content.

4. Online Collaboration Tools:

Examples: Google Workspace, Microsoft Teams, Zoom

Features: Real-time collaboration, video conferencing, document sharing, and group work.

5. Digital Content Creation Tools:

Examples: Canva, Adobe Creative Suite, iMovie

Features: Creating multimedia content, presentations, and graphics for teaching.

6. Virtual Reality (VR) and Augmented Reality (AR):

Examples: Oculus Quest, Google Cardboard, Merge Cube

Features: Immersive learning experiences, simulations, and field trips.

7. Educational Games and Simulations:

Examples: SimCity, Kerbal Space Program, PhET simulations

Features: Hands-on learning, problem-solving, and critical thinking.

8. Online Assessment Tools:

Examples: Quizlet, Kahoot!, Socrative

Features: Quizzes, tests, surveys, and instant feedback.

9. Adaptive Learning Platforms:

Examples: Knewton, Aleks

Features: Personalized learning paths based on student performance and progress.

10. Social Learning Platforms:

Examples: Edmodo, Schoology

Features: Online communities, discussion forums, and peer-to-peer learning.

Additional Considerations:

- Accessibility: Ensure that digital tools are accessible to all students, including those with disabilities.
- Professional Development: Provide teachers with training and support to effectively use digital tools.
- Integration: Align digital tools with curriculum objectives and teaching strategies.
- Student Engagement: Use digital tools to create engaging and interactive learning experiences.

By effectively utilizing these digital tools and techniques, educators can create a more dynamic, personalized, and effective learning environment.

Significance of Digital Tools and Techniques in Teaching

Digital tools and techniques have revolutionized the landscape of education, offering numerous benefits for both teachers and students. Here are some of the key significance of these tools:

a) **Enhanced Student Engagement**

A. Interactive learning: Digital tools, such as educational games, simulations, and interactive quizzes, can make learning more engaging and fun.

B. Personalized learning: Teachers can use digital tools to create personalized learning experiences tailored to individual students' needs and learning styles.

b) **Improved Access to Information**

- **Vast resources:** Digital tools provide access to a vast array of educational resources, including online textbooks, articles, videos, and interactive content.
- **Global perspectives:** Students can connect with peers and experts from around the world, gaining exposure to diverse perspectives and experiences.

c) **Effective Communication and Collaboration**

- **Online platforms:** Digital platforms, such as learning management systems (LMS) and online forums, facilitate communication and collaboration between teachers and students.
- **Remote learning:** Digital tools enable flexible learning options, including remote learning and online courses.

d) **Streamlined Assessment and Feedback**

- **Automated grading:** Digital tools can automate certain grading tasks, saving time for teachers and providing students with timely feedback.
- **Data-driven insights:** Digital tools can provide valuable data on student performance, helping teachers identify areas where students may need additional support.

e) **Increased Efficiency and Productivity**

- **Time-saving:** Digital tools can streamline administrative tasks, such as creating lesson plans, grading assignments, and managing student records.
- **Organization:** Digital tools can help teachers organize and manage their teaching materials and resources.

f) **Preparation for the Digital Age**

- **Digital literacy:** Integrating digital tools into the classroom helps students develop essential digital literacy skills, which are crucial for success in today's world.
- **Future-ready:** Digital tools prepare students for a future where technology plays an increasingly important role in all aspects of life.

Conclusion: Digital tools and techniques have significantly reshaped the landscape of teaching, offering transformative benefits that were once unimaginable in traditional education settings. These tools have enhanced accessibility, allowing students from diverse geographic and socio-economic backgrounds to access high-quality education. The use of multimedia resources, interactive simulations, and adaptive learning systems has created more personalized and engaging learning experiences, catering to the unique needs of individual students.

In conclusion, digital tools and techniques are not just supplementary to traditional teaching but have become integral to the future of education. As technology continues to evolve, educators, policymakers, and stakeholders must work together to ensure equitable access, enhance teacher preparedness, and foster a learning environment where technology complements rather than replaces human interaction. The successful integration of these tools will define the next generation of teaching, making education more inclusive, engaging, and effective.

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EFFECTIVENESS OF KOLB'S EXPERIENTIAL LEARNING MODEL ON COMMUNICATION AMONG 9TH GRADE (CBSE) STUDENTS

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Abstract

Kolb's experiential learning model in language could be learner centred and enhance communication by the implementation of Kolb's experiential learning model. In Kolb's experiential learning model students play an active role and learn to reflect on their learning experiences. In the present study, the researcher has reviewed prior studies and formulated hypothesis. The experimental method was adopted for students from the CBSE board and English as the medium of instruction. The 35 students were taught using the conventional method of teaching and 35 students were taught using Kolb's experiential learning model. The instructional module prepared for the topic of THE BOND OF LOVE (English Prose). The Kolb's experiential learning model includes Stage 1: Experiencing (concrete experience), Stage 2: Examining (Reflective observation), Stage 3: Explaining (abstract conceptualization), 4. Concrete Experience, Stage 5: (Active Experimentation) The Pre-test was conducted before the implementation of the program and the post-test was administered after the program. Data were analysed by applying the Anova and the hypotheses were tested. The study revealed that the experimental group has performed better in the communication as compared to the control group. Kolb's experiential learning model in language increases communication among the learners. The instructional program based on Kolb's experiential learning model activities increases communication. The study recommends that, such learning can be imparted in different curriculum and also for different age groups of students.

Key Words: Experiential Learning, communication.

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1. Introduction: Present Education is learner centred. Considering individual difference among the learners, it is necessary to plan appropriate teaching strategies. Learning can be imparted through Kolb's experiential learning model with instructional module. The learning which enhances hands-on experiences leads to meaningful learning among the students. Kolb's experiential learning model is one of the approaches of constructivist learning. As stated by Lewis and Williams "In its simplest form, Kolb's experiential learning model means learning from experience or learning by doing". Experiential education first immerses learners in an experience and then encourages reflection about the experience to develop new skills, new attitudes or new (Lewis & Carol , 1999) ways of thinking." (Lewis & William 1994)

2. Literature Review:

Ju-Yeon Uhm et al. (2022), conducted research on "Implementation of an SBAR communication program based on experiential learning theory in a paediatric nursing practicum: A quasi-experimental study" with the objective of developing communication through SBAR (Situation, Background, Assessment, and Recommendation) based on experiential learning. The study concludes that the experimental group demonstrated higher communication than the controlled group.

3. The Rationale of the Study: The present education system is changing, so there is a need to promote learning based on a learner-centred approach. The idea of the Kolb's experiential learning model in language provides a meaningful learning experience. And the instruction focuses on building the learners to reflect on the learning process at their own pace. The instructional module program could be used to increase communication through experiential learning. The stages of experiential approach are; Experiencing (concrete experience), Examining (Reflective observation), Explaining (abstract

conceptualization), Concrete Experience, (Active Experimentation). The study was intended for ninth grade students.

4. Significance of the Study: Learning is the process of acquiring new skills, methods, strategies, technics, models and styles. It is an active process of inquiry, engagement, and participation in the learning process. Engaging the learners in the different learning process in language increases their attention. It motivates them to practice critical thinking skills and insightful learning experiences. The instructional strategies in the language classroom with Kolb's experiential learning model will enhances communication in classroom which leads to a fun learning environment. The study helps curriculum designers to include instructional module for different grade levels. The study is beneficial to students in language subjects, and other subjects. As a consequence of teaching learner through the Kolb's experiential learning model with instructional program would enhances communication.

5. Objective of the Study:

- To study the effects of experiential learning approach of teaching English in relation to traditional method on Communication Skill among ninth standard students.

6. Hypothesis of the Study:

- H_01: There's no significant difference in the means of the post-test scores of both the experimental group and the control group on Communication Skill among ninth standard students.

7. Methodology of the Study: The study was based on the quasi-experimental method along with pre-test post-test parallel group design. The aim was to enhance the communication skill through experimental learning for experimental group and conventional method for control group students. Communication Skill Mapping Scale developed and validated by the investigator to identify and validate the different managerial skills of students at the 9th grade students of CBSE school. Investigator prepared rating scale named Communication Skill Mapping Scale. The population of the study consists of students of grade ninth from CBSE board curriculum and English as a medium of instruction. The experimental and the control group included 35 and 35 students respectively. The experimental group was taught by Kolb's experiential learning model with instructional module, and control group was taught the same topic by conventional method of teaching.

7 Intervention Program: Considering the previous test in English two equal groups were formed considering Z scores. The intervention program was conducted for the experimental group and conventional method was used for the control group of the study. The appropriate learning experiences were developed by the researcher. The program includes varied task, group and individual activities, think and share with partner, videos and group discussion, students' reflection on learning for the topic in language. The pre-test on communication was conducted for both experimental and control group of students. After execution of the program, post-test was conducted for both the groups. The effectiveness was measured by comparing pre-test and post-test scores of controlled and experimental groups using statistical techniques. The significant difference was measured by comparing pretest and post-test scores of experimental groups.

8. Results and Analysis: To study the effects of experiential learning approach of teaching English in relation to traditional method on Communication Skill among ninth standard students.

The objective of the study was to study the effects of experiential learning approach of teaching English in relation to traditional method on Communication Skill among ninth standard students. This objective

was analysed and interpreted using Mean, SD, 't', and ANOVA on Communication Skill test scores. To test the objective, the null hypothesis listed below was constructed.

Ho1: There is no difference in means of the post-test scores of both the experimental group and the control Group on Communication Skill among ninth-standard students.

ANOVA of scores related to Communication Skill in English.

The results of administering the Communication Skill test to the experimental and control groups after successfully completing the instruction techniques

Table 1: Summary of ANOVA for Experiential Learning Approach of teaching English in relation to traditional method on Communication Skill

Sources of Variation	SS	df	MSS	F	P	Mean	SD	t-value	p-value
Instructional methods	15.557	1	15.557	5.004	0.029				Significant at 0.05 Level
Adjusted Error	211.42	68	3.109						
Total	226.98	69							
Experiential Learning Approach Experimental Group						45.45	1.88	2.234	Significant at 0.05 Level
Traditional method Control Group						44.51	15.251		

According to Table 1, the F ratio (5.004) for instructional approaches is higher than the theoretical value (3.98) for degrees of freedom 1 and 68, showing that it is considered statistically significant at the 0.05 significant levels. Therefore, the null hypothesis asserts that there is no substantial difference in the means of the post-test scores of both the experimental group and the control group on Communication Skill among ninth standard students. The alternate hypothesis continues to be accepted, there is difference in the means of the post-test scores of both the experimental group and the control group on Communication Skill among ninth standard students. The mean, standard deviation, and 't' value of the instructional methods were calculated and reported in Table 4.1 to determine which instructional approach proves most effective in developing the Communicational Skill ninth-grade students. Table 1 makes it obvious that the Mean score of the Kolb's experiential method is higher than the Traditional Method. The t-value between the two means of the experimental group and the control group on Communication Skill on English was found to be 2.234, which is more than the table value (2.00). Therefore, it can be said that the Kolb's Experiential Learning Approach is significantly more effective than the Traditional Method in developing the Communication Skill among ninth-standard students.

Figure 1

Graphical representation of Communication Skill of the Experimental group
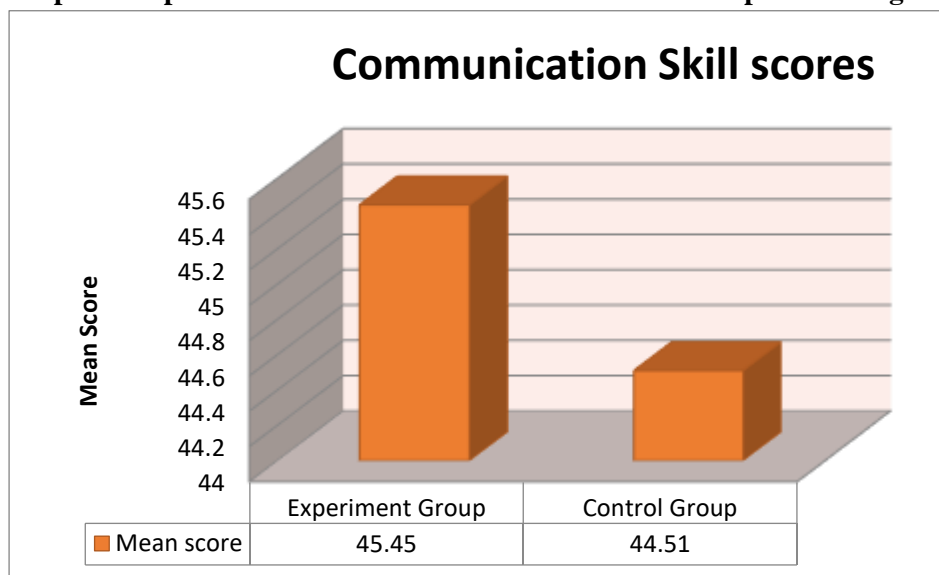
Figure 1 outlines that the post test score for the Experiment group was 45.45.

The post-test mean score for the Control Group is 44.51 this implies that the Experimental group mean score is more than Control Group.

Result:

- The two Instructional Methods Kolb's Experiential Learning Approach and Traditional Method for Language English showed differential effects in enhancing Communication Skill among ninth-standard students.

The Kolb's Experiential Learning Approach is significantly more effective than the Traditional method in enhancing Communication Skill among ninth-standard students.

Result:

9. Findings and Discussion:

In the present study, it's found that there is no significant difference in pre- test mean scores in communication between experimental and control group before implementation of Kolb's experiential learning model among the students of ninth. The study revealed that there is a significant difference in post-test scores in communication between experimental and control group after the treatment. Instructional module was found to be effective than traditional method of teaching. After implementation of the experiential learning, there was a change in students' perception and contributed to promote communication. Engaging learners in learning process increased their autonomy, and motivated to be creative in sharing their learning experience. The researcher found that Kolb's experiential learning model instructional program strengthens communication abilities.

10. Implications:

Experiential learning is designed to engage students' emotions as well as enhancing their knowledge and skills.

- The results of Kolb's experiential learning model will enhance communication skill.
- Helps to develop Kolb's experiential learning Model approach-based teaching-learning strategy of general English for the grade IX students.

- Helps to implement the Kolb's experiential learning model approach-based teaching-learning strategy of English for the class IX students.
- Helps to compare the communication skill of students exposed to Kolb's experiential learning model-based teaching-learning with that of students exposed to traditional mode of teaching.
- Helps to find the effectiveness of Kolb's experiential learning Model based teaching-learning strategy of teaching English with regard to communication skill in different subjects.

11. Conclusion: The study concluded that Kolb's experiential learning model in language enhances communication skill among the students of grade ninth. Moreover, the experiential instructional module is effective in enhancing communication skill as compared to the conventional method of teaching. The innovative approaches in teaching-learning will be beneficial for learners to boost their deeper understanding as well as interest in language among the students. The study concluded that Kolb's experiential learning model in language communication skill, and it is best achieved when teacher acts as a facilitator of learning. In conclusion the results of the study would provide a framework for educators to implement best practices that will lead to communication skill of students in language

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THE ROLE OF E- LEARNING PLATFORM IN EDUCATION

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Abstract

Education plays a pivotal role in shaping the students and enhances knowledge through effective education practice in school, colleges and universities. Era of traditional method of chalk- talk method shifted to technology oriented digital education. Digital education encompass technical skills, online tools promotes online education. Online education cater the needs of students in learning, teaching adapt and utilize innovative methods. Innovative methods enhance learning through E-learning platform. E- Learning platform has been implemented in the present scenario to fill the gap of traditional learning. This article highlights the online education through online platform, discuss advantages, disadvantages of online education, evokes practitioners, policy makers, academicians; researchers enrich the sources for academic success of students build the nation with learning, teaching .

Key words: *online education, Traditional learning, Digital education, online platform, E- learning*

Introduction: Teachers are the back bone of the educational system, the fragrance of teaching blooms students' performance and promote social skills like leadership, team spirit, and peer interaction. Peer interaction in the classroom under supervision of teacher enables to understand emotional feelings, strengthen psychological support, the teacher fosters the educational views, motivates the student to learn with eye contact. The educational system emerged trend into digital education through E- learning platform.

Objectives:

- To develop orientation towards technical skills, tools in education in promotion of digital education through online.
- Exploration of online education through pedagogy 2.0 version in digital education practices.

Digital education is an emerging trend: Digital education is technology oriented, education is conveyed through online. Online education is a form of education takes place through internet enhances both E- teaching and E- learning.

Online paradigm in Education:

Online paradigm in education evokes the students and teacher following steps

- The teacher and student in the online education should be mutual trust.
- Online education should be maintained in discipline and punctuality so that the teacher and student can be confident.
- Teacher involvement in the subject or topic should be genuine and energetic; the delivery of content should be with clear voice.

Traditional Education learning	Online Education learning
➤ Teacher instructs the content or subject in front of the students in a lively atmosphere with face to face interaction, incorporation communication skills with eye contact.	➤ Teacher instructs the content or subject through internet can access at home with audio, video, website pod cast.
➤ Students pay attention towards teacher and take notes, talks with peers, plays in playground.	➤ Students work in the class should be connected to internet to gather information.

Online teaching or E- teaching: Online teaching is a computer based teaching, teacher teaches with the use of technology, instructs through internet as a source. Online instruction includes asynchronous and synchronous interactions through online content. This interaction through students provides ability to learn anywhere/ any time without rules and regulations.

E- Content: E-Teacher plans the content or lesson to be taught in the form of online text, images, graphs, audio- visual animation. Students are interested in learning, keep engaged in virtual classroom.

Content development tools: E- content development tools contains for the text creation M-S Word, power point, online evaluation like kahoot, quizzes, virtual delivery platform like Google classroom, coursera, udemy , Animation tools like powtoon, Google photos.

Virtual classroom

Virtual classroom is online classroom opposite to traditional classroom that students and teachers engage and interact with internet consists of synchronous and asynchronous learning.

✧ Synchronous learning: Learners in the virtual classroom are learned with reality learners they interact with each other.

✧ Asynchronous learning: asynchronous is a way of learning the teacher provides lectures, materials.

■ ***Blended learning***: Blended learning is a hybrid way of learning occurs through internet by the person or teacher instructs with the help of online resources. ■ ***Flipped classroom:*** Flipped classroom is a classroom with short video lectures that enables to learn students at home with ICT tools, cooperative strategies, and innovative assessment strategies.
■ Blended learning: blended learning is a hybrid way of learning occurs through internet by the person or teacher instructs with the help of online resources. ■ Flipped classroom: Flipped classroom is a classroom with short video lectures that enables to learn students at home with ICT tools, cooperative strategies, and innovative assessment strategies.

Online Learning or E- learning: Online learning or E- learning take place through the online class or webinar or webposium or online workshop through internet. Online class are categorized based on their promotion of learning to the students.

■ Live class

■ Record class

■ Activity based class

Live class: Online live class telecast the classroom from the home: Virtual classroom, Live online class organization requires following steps:

◆ Identify a calm room without noise or disturbance that every concept allowed to understand clearly.

◆ It includes the both presence of audio- visual aids with virtuality.
◆ The students are provided with meeting I.d and password and enter the class to listen the lectures.
◆ The students are provided chance to interact with teacher or resource person through chat box r mail and clarify their doubts.

✧ Google meet, zoom, Cisco webex, Jisti, Micro soft Teams, you tube.

Record class: Recorded class of online the information to be taught with audio-visual are recorded and provided to access the learners.

✧ MOOCS Massive open online class course the learners from micro to massive.

Activity base class:

Activity based online class is a web - based platform the learners are encouraged learn through activity, Google documents, sheets, surveys, games.

✧ **Google forms:**
   Google forms are widely used for survey, questionnaire, and fill information of particular student.

✧ **Google classroom:**
   Google classroom engages the learning in participation in the work.

✧ **Kahoot:**
   Kahoot is a game based classroom, the learner are active in participation answers to the questions on screen.

Advantages of online Education:

✧ Online education provides the learners individual attention in learning, teaching.
✧ Online education provides the students more freedom make choices of their own.
✧ Online education promotes to learn the subject or content anywhere, any time without rules and regulations with flexible time.
✧ Digital innovative like e- pathasala, e- adhyayam promote learning in free of cost and helps in enrichment of knowledge.

Disadvantages of online education:

✧ Face to face interaction and eye contact in the traditional education that helps the teacher to understand feelings, emotions throws light sharpens are lost in online education.
✧ Internet connectivity, technical issues creates disturbance in teaching, learning.
✧ Playground activities and extra circular activities scope are reduced bounded with laptop, mobile.
✧ Stress are noted to physical, psychological due to completion of work, miss communication
✧ Minor students due to continuous class over online leads to eye problems, sight early age.

Conclusion: Online education has been implemented in the present scenario lead the traditional classroom into virtual classroom. Virtual classroom the students learning through online with various class like activity, recorded, live class. Online class promoting the students enhance knowledge in online platform where the teacher and student face to face interaction, eye contact, social skills developing activities are lost. The students in online learning are stressed to some extent due to continuous class and work in the internet, mis communication, and lack of motivation.

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STUDY OF INNOVATIVE EDUCATIONAL APPROACHES AND THEIR IMPACT ON STUDENT INVOLVEMENT

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Abstract

Innovative teaching strategies actively engage students and capture the attention of audiences. A decade ago, the concept of effective and groundbreaking teaching was primarily depicted in fictional films. Today, however, technology offers educators across the globe a variety of tools to refine their instructional methods. Enhancing instructional approaches is essential. These contemporary teaching aids and techniques significantly boost student engagement and learning outcomes. This research explores the influence of these modern teaching practices on student Involvement.

Keywords: Innovative educational approaches, Student involvement.

Introduction: This examines contemporary teaching methodologies that aim to enhance student outcomes. These strategies typically prioritize student engagement, with active learning contributing to decreased absenteeism and enhanced academic performance. In many ways, the integration of innovative teaching methods within the classroom signifies a fundamental acknowledgment that our instructional approaches can be refined. It highlights the necessity for growth and development, which is precisely what we aspire for our students. It is essential to consider our teaching and learning strategies from the learner's viewpoint. As students, do we gain more from a class by passively remaining seated during a 45-minute lecture? Or do we learn more effectively when we actively engage in the class by posing questions, collaborating on projects, and tackling problems? This paper focuses on various strategies that effectively enhance teaching and learning, thereby directly improving student engagement levels. Learning is a lifelong journey, not a destination. It is the steady, unwavering commitment to expanding our horizons, challenging our assumptions, and unlocking new realms of understanding. Like a flame that burns ever brighter, the desire to learn and grow should blaze within us from youth to old age, fueling our curiosity and propelling us forward. Mastering a subject or skill is not the end goal, but rather the starting point for further exploration. There is always more to discover, new perspectives to uncover, and innovative ideas to encounter. By cultivating an insatiable appetite for knowledge, we unlock doors to personal growth, professional advancement, and a richer, more fulfilling existence.

Innovative Teaching Strategies: The implementation of innovative teaching practices within the classroom can significantly enhance the learning experience, making it more effective and efficient. Engaging in various experimental approaches is a continuous process that enables educators to foster student development. Below are several methods for integrating innovation into teaching and learning.

A. Personalized Learning

Personalized learning focuses on tailoring the educational experience to meet the individual needs of each student, determining what, when, and how they are taught. Rather than employing a uniform strategy for the entire class, educators modify their approaches to align with each student's unique abilities, thereby facilitating their success. Approximately 65% of international high schools have adopted personalized learning plans for their students, which are informed by the teacher's deep understanding of their students' learning styles and interests. While each student's personalized learning

journey is distinct, the overarching aim remains to meet grade-level standards or subject competencies. This approach encompasses the following elements:

- Blended learning encourages students to take ownership of their educational journey, with the teacher acting as a facilitator and mentor in a discovery-oriented environment. Students have the autonomy to choose how and at what pace they engage with the material.
- Adaptive learning technology utilizes data from student responses to specific questions presented on a computer platform. This system provides immediate feedback or adjustments to the learning experience, alerting the teacher to make necessary modifications to the lesson plan.

B. Project-Based Learning : Project-based learning is an educational approach where students are tasked with identifying a real-world issue and developing a viable solution. This method prioritizes essential skills such as research, critical thinking, problem-solving, and collaboration. It promotes an experiential learning environment, encouraging students to engage actively rather than relying solely on rote memorization. This approach heavily emphasizes teamwork, the use of digital technologies, and the application of problem-solving skills to address specific challenges. By fostering greater student engagement, it enhances the learning experience and allows for diverse technological applications, ultimately increasing students' enjoyment and satisfaction with their education. Moreover, this teaching method bridges the gap between students, educational institutions, and their communities, connecting them to the broader world. It highlights the interrelatedness of various disciplines and offers authentic learning experiences, moving away from artificial scenarios.

C. Jigsaws

Educators understand that the ability to effectively convey a concept to others signifies true mastery of the subject. Jigsaws, a widely utilized cooperative learning strategy, involve students in a peer-teaching format.

In this method, students are organized into groups, each assigned specific content to learn and subsequently teach to their classmates. Once each group has mastered its material, the students are restructured into new groups, ensuring that each new group contains one member from each original content group, akin to assembling a jigsaw puzzle where each piece contributes to a comprehensive understanding. Each participant then shares their acquired knowledge, bringing the lessons to life and facilitating deeper engagement with the subject matter. Through this collaborative process, students enhance their learning by interacting with both their peers and the content. As they teach others, they solidify their expertise in the material. However, a potential drawback of this approach arises when a group member, designated as the "expert," misinterprets the information or struggles to convey it effectively to others.

1. Continuous learning throughout life

Lifelong learning is the key that opens the mind to infinite possibilities. It is the mindset that transforms us from passive recipients of information to active, engaged learners - always questioning, experimenting, and expanding the boundaries of our understanding. This is the path to a life of meaning, purpose, and continuous self-improvement.

2. Self-directed learning

In today's rapidly evolving world, the ability to continuously learn and adapt is more crucial than ever before. Lifelong learning is not just a buzzword, but a mindset that empowers us to stay relevant, expand our horizons, and unlock our full potential. At the heart of this journey lies self-directed learning - the art of taking charge of our own educational experiences.

Self-directed learning is a transformative approach that allows us to tailor our growth to our unique needs and interests. It's about cultivating the curiosity to explore new subjects, the discipline to pursue knowledge independently, and the creativity to apply what we've learned in innovative ways. Whether it's mastering a new skill, delving into a fascinating topic, or addressing a specific challenge, self-directed learning puts us in the driver's seat of our own development. By embracing this empowering mindset, we can transform ourselves from passive consumers of information to active, engaged learners. The rewards are vast - from enhanced problem-solving abilities and increased job prospects to a deeper sense of fulfillment and personal growth. So, let us embark on this lifelong learning adventure, fueled by the boundless potential of self-directed exploration. The future is ours to shape, one lesson at a time.

3. Formal, informal, and non-formal learning

Dive into the Diverse Realms of Learning: Formal, Informal, and Beyond Learning takes many forms, each with its own unique power to shape our minds and enrich our lives. From the structured corridors of formal education to the organic pathways of informal exploration, the spectrum of learning opportunities is vast and fascinating. Formal learning, the bedrock of traditional schooling, provides a solid foundation of knowledge and skills. It follows a predetermined curriculum, guided by experienced instructors who impart their expertise through lectures, assignments, and assessments. This structured approach ensures a comprehensive understanding of core subjects, preparing individuals for academic and professional success. Yet, the confines of the classroom often fail to capture the full breadth of human curiosity. Enter the realm of informal learning, where the world becomes our classroom. This organic, self-directed form of exploration allows us to delve into topics that ignite our passions, whether it's tinkering with a new hobby, diving into online resources, or engaging in thought-provoking discussions with peers. Informal learning empowers us to tailor our educational journey to our unique interests and needs.

Beyond these two well-known categories lies the intriguing domain of non-formal learning. This flexible approach blends the structure of formal education with the spontaneity of informal exploration. Non-formal learning often takes place in community settings, such as workshops, training programs, or even cultural events, where individuals can acquire new skills, gain practical knowledge, and engage in collaborative experiences. The richness of the learning landscape lies in the interplay between these distinct yet complementary modes of education. By embracing the diversity of formal, informal, and non-formal learning, we unlock a world of boundless opportunities for personal growth, intellectual exploration, and lifelong discovery.

4. Emphasis on skills development and personal growth

Embark on a transformative odyssey where the pursuit of skills development and personal growth become the keys to unlocking your greatest possibilities. Witness the blossoming of your talents as you ascend new heights, shattering the boundaries of what you once thought possible. This is no mere checklist of competencies, but a profound metamorphosis - a renaissance of the self, where you shed the constraints of the past and emerge anew, brimming with confidence and capability.

Each step forward on this path of self-improvement is a testament to your resilience, a defiant declaration that you will not be defined by your limitations, but by your unwavering commitment to bettering yourself. Embrace the exhilaration of mastering new skills, feel the rush of accomplishment as you surmount challenges, and revel in the profound sense of fulfillment that comes from unleashing your full potential. This is your invitation to embark on a journey of limitless growth, where the only

constraints are those you choose to shed. Unlock the door to your greatest self, and let the world witness your transformation.

5. Encourages adaptability, resilience, and innovation

Embracing adaptability, resilience, and innovation unlocks a world of boundless potential. In an ever-changing landscape, the ability to nimbly pivot, weather challenges, and pioneer new solutions becomes a wellspring of competitive advantage. Those who cultivate these essential qualities are empowered to navigate uncertainty, capitalize on emerging opportunities, and continuously reinvent themselves and their organizations. By fostering an agile, innovative mindset, you equip yourself with the tools to not just survive, but to thrive - no matter what the future may hold.

Broad objectives and adequate preparation:

The primary aims of employing creative methodologies in the educational process are to facilitate students' acquisition of in-depth knowledge within the subject matter, develop essential skill sets, and ultimately achieve high scores in their end-of-semester examinations. To achieve these objectives, faculty members consistently engage in the following activities:

• Enrolling in the Faculty Development Program

• Attending online courses

• Enhancing their expertise through Institute-Industry Interaction

• Delivering lectures in Value-Added Courses

In addition to the aforementioned initiatives for the academic year 2022-23, the following activities are also incorporated:

• Participating in industrial training

• Engaging in an Advanced Training Program

These efforts ensure that faculty members are well-prepared with the necessary knowledge to fulfill their teaching and learning goals.

Student Involvement and Engagement

1. Student Motivation and Interest

Students exhibit a range of interests that can vary in depth and permanence. Situational interests are those that arise temporarily due to specific elements present in the immediate environment. For instance, unusual visuals, sounds, or phrases can evoke situational interest. A teacher might engage students by displaying a captivating image on a projector, playing a short piece of music, or making an unexpected remark. At a more conceptual level, introducing unusual or surprising discussion topics can also capture interest initially. In contrast, personal interests represent more stable preferences that students hold and are typically evident across various contexts. Within the classroom, a student may express a personal interest in certain subjects, activities, or topics, although this may not always be the case. Beyond the classroom, students often have additional personal interests in non-academic pursuits, such as sports or music, or in specific individuals, like a celebrity or a nearby friend. These non-academic interests can sometimes clash with academic pursuits, as students may find it more appealing to visit a shopping mall with a friend than to engage in studying their favorite subject.

2. Active Learning and Participation

Active learning encompasses a diverse array of instructional strategies that involve students as engaged participants in their educational experience during class sessions with their instructor. Generally, these strategies include collaborative work among students, although they may also incorporate individual tasks and reflective practices. The spectrum of these teaching methods varies

from brief, straightforward activities such as journal writing, problem-solving, and paired discussions, to more extensive and complex activities or pedagogical frameworks, including case studies, role-playing, and structured team-based learning.

3. Student Autonomy and Agency

Students expressed a greater sense of connection to their school and fellow classmates when they perceived that their peers were:

afforded opportunities to participate in decision-making processes.

able to influence operational matters.

involved in establishing certain regulations.

consulted by their educators regarding their learning interests.

permitted to contribute to the allocation of class time.

4. Collaboration and Teamwork

Contemporary organizations are fueled by skilled and motivated personnel. To reach corporate objectives, these individuals dedicate themselves to collaborating within their teams to attain the desired results. As the work environment transitions to a digital landscape, managers and their teams increasingly depend on teamwork and collaboration to maintain effectiveness. Although the terms are often used synonymously, they do not hold identical meanings. When teamwork and collaboration complement one another, teams can become more robust and deliver superior outcomes.

5. Critical Thinking and Problem-Solving

Critical thinking encompasses the process of posing inquiries, identifying issues, evaluating evidence, scrutinizing assumptions and biases, steering clear of emotional reasoning, resisting oversimplification, exploring alternative interpretations, and embracing uncertainty.

Conclusion: Innovative methods are remarkably effective and have the potential to greatly enhance educational processes within any institution. The implementation of progressive strategies in teacher education programs is essential for delivering high-quality education, as these approaches equip students with the necessary skills. Educational methodologies foster inquiry, exploration, the application of technology, and content analysis across diverse platforms and research avenues. Students are encouraged to tackle problems both individually and in groups, facilitating personal development and the sharing of knowledge with peers. They possess a wealth of knowledge. The primary objective is to enhance student engagement, which in turn leads to an elevation in intellectual development.Future educators will play a vital role in disseminating knowledge throughout society. However, it is important to acknowledge that challenges still exist in the application of innovative techniques. Addressing and mitigating these challenges will enable us to embrace the idea of holistic development. One of the major challenges of teacher education today is the rapidity with which schools must adapt themselves to changing social needs. Innovative teaching pedagogical approaches for teacher education practices alone enable the teacher education institutions to rise to the occasion.

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INNOVATIVE PEDAGOGICAL APPROACHES

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Introduction: The Guru-Shishya parampara has been the driving force behind the conventional Indian teaching-learning system. It is a comprehensive system that gives students the necessary life skills, value-based learning, and thorough information. The main goals of the entire learning process have been accomplished through a variety of pedagogies, such as exposure to real-world situations and experiential learning, value-based learning through stories and narrations, problem-solving through role-playing and explorations, and memorization and dissemination through discussions and debates.

To meet the changing demands of various pedagogical techniques in higher education, a number of policy frameworks have been developed in recent decades. A massive effort to combine Indian traditional value-based education with the current technology-dominated teaching and learning process resulted in the National Education Policy 2020 (NEP), which was released recently. Developing a pedagogy that makes education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centered, discussion-based, adaptable, and pleasurable is one of its many strategies for overhauling the current educational system. The NEP 2020 aims to create well-rounded, capable people with 21st-century abilities, therefore curricula and pedagogies must be refocused and updated to support this goal. This involves improving the caliber of curricula and utilizing suitable pedagogies to successfully deliver to the learners.

Teachers are essential to the implementation of the learner-centric approach of the NEP 2020. In order to design teaching-learning in a way that works best for the students in their classrooms, the policy provides teachers greater freedom to choose pedagogical elements. However, the teacher's comprehension of the many pedagogical techniques is necessary for the meaningful use of this autonomy and flexibility.

Learning outcomes are directly impacted by pedagogical procedures, which decide the learning experiences that are planned for the students. Therefore, in order to properly accomplish the curriculum's goals, relevant pedagogy must be used. An inclusive approach to communication, discussion, debate, research, and possibilities for interdisciplinary and cross-disciplinary thinking must be given more weight in such teaching. For teachers to enhance their potential and attain the intended learning results for pupils, they should receive the necessary training in pedagogical approaches. These pedagogical training components need to emphasize the following:

- Meeting the needs of kids with disabilities and the various learning requirements of students in a classroom.
- The variations among students' visual, aural, and kinaesthetic learning methods.
- Students' varied backgrounds in terms of their field of study, social, economic, cultural, and educational backgrounds;
- Variations in learning speeds.

Innovative Pedagogical Approaches:

When we talk about "innovative pedagogical approaches," we mean those pedagogical approaches that use appropriate means (tools) and methods (ways) in new and creative ways and in a variety of

combinations to make the teaching-learning process more effective by allowing students to achieve the seven expected/defined learning outcomes, develop their abilities to be creative, adapt to changes, manage and analyze information, and work with knowledge. The adjectival word "innovative" connotes the use of new, advanced, and original methods.

Innovative pedagogical approaches positively impact student learning, behaviour and attitudes and are capable of ensuring that all students achieve the defined course/programme learning outcomes and demonstrate the expected graduate attributes.

Categories of Pedagogical Approaches

(i) Behaviourism:

Teacher-centered learning approach is based on behaviorism theory. It advocates the use of direct instruction and lecture-based lessons wherein the teacher is the sole authority to lead the lesson and the knowledge being delivered in a curriculum where each subject is taught discretely (topic-based learning). Lectures, choral repetition, rote learning, and modeling and demonstration are all expected components of a behaviorist teaching style. Each of these actions is 'visible', organized, and guided by the instructor. However, there may be a change in the class where the student takes center stage and shows what they have learned. Another name for behaviorism is a conventional teaching approach.

(ii) Constructivism:

Learning through experiences and reflections is a part of constructivism theory. Constructivist pedagogy is 'invisible pedagogy' as it puts the child at the centre of learning. A constructivist approach would incorporate project work and inquiry-based learning and might adopt a Montessori or Steiner method. A lesson having constructivism theory includes individualisation and leads to slower-paced learning having hidden outcomes with the support of the expert and less teacher talk. This pedagogy also has scope for emphasis on being outdoors and engaging with nature. Constructivism is also sometimes referred to as a progressive teaching style.

(iii) Social Constructivism:

Social constructivism pedagogy could blend two priorities: teacher-guided and student-centred. The teacher uses group work elements, having smaller group sizes and limited topics for choices. The teacher may also use teacher modelling, questioning, and a mixture of individual, pair, and whole-class instruction.

(iv) Liberationism:

A liberationist approach involves democracy in the classroom as the student's voice is placed at the centre. The class discovers the subjects together, and the teacher plays the role of a learner. A teacher may use examples like literature containing non-standard constructions, such as graffiti or hip-hop. Students playing the role of the teacher decide about the topic of the lesson and showcase their learning through performance, speech, or dance. The teacher thus provides space and opportunity for the students to learn independently.

As per the above innovative pedagogical practices, actual transaction in the classroom made through

1. Blended learning – Rethinking the purpose of the classroom and classroom time
2. Gamification – Engagement through play and the pedagogies of games
3. Computational thinking – Problem-solving approach
4. Flipped Classroom
5. Experiential learning – Investigating in a complex world

1. Blended Learning

Blended learning is an educational approach that combines traditional face-to-face instruction with online learning components. It seeks to leverage the strengths of both in-person and digital learning to create more flexible and personalized learning strategies and experience. An example of blended learning might involve students attending in-person classes for lectures and discussions while also completing online modules, interactive simulations, or collaborative projects outside of the classroom. This approach allows for a mix of teacher-led instruction, self-paced online learning, and interactive activities, catering to different learning styles and promoting student engagement.

In a blended learning scenario, a history class might have students attend traditional lectures and participate in classroom discussions. Additionally, the teacher could integrate online modules featuring interactive timelines, virtual tours of historical sites, and collaborative research projects. Students might use online discussion forums to share their insights and engage with peers beyond the physical classroom. The blend of in-person and online activities aims to enhance the overall learning experience and provide students with more flexibility in how they access and interact with course content.

2. Gamification

Gamification integrates game elements into non-game contexts, such as education, to enhance engagement and motivation. Points, levels, challenges, and rewards are used to make learning more enjoyable.

In a language learning app, students earn points for completing lessons, quizzes, and interactive exercises. As they accumulate points, they unlock new levels and earn virtual rewards. This gamified learning approach incentivizes consistent learning, provides a sense of achievement, and makes the language learning process more enjoyable and interactive.

3. Computational Thinking And Problem-Solving

Computational thinking

Computers can be used to help us solve problems. However, before a problem can be tackled, the problem itself and the ways in which it could be solved need to be understood.

Computational thinking allows us to take a complex problem, understand what the problem is and develop possible solutions. We can then present these solutions in a way that a computer, a human, or both, can understand. It follows four key techniques (cornerstones) to computational thinking:

- **Decomposition:** breaking down a complex problem or system into smaller, more manageable parts.
- **Pattern recognition:** looking for similarities among and within problems.
- **Abstraction:** focusing on the important information only, ignoring irrelevant detail.
- **Algorithms:** developing a step-by-step solution to the problem, or the rules to follow to solve the problem.

Each cornerstone is as important as the others. They are like legs on a table - if one leg is missing, the table will probably collapse. Correctly applying all four techniques will help when programming a computer.

Problem-Based Learning (PBL) is an instructional method where students learn through solving real-world problems. It promotes critical thinking, collaboration, and the application of knowledge to practical situations.

In a biology class, students might be presented with a real-world problem, such as designing a sustainable food solution for a community. Working in groups, students would need to research,

analyze, and propose a solution that considers the principles of biology, environmental impact, and cost-effectiveness. This approach not only deepens their understanding of physics but also develops problem-solving skills in a practical context.

4. Flipped Classroom

The flipped classroom model reverses the traditional teaching approach by delivering instructional content, such as lectures, through digital media outside of the classroom. Class time is then used for interactive activities, discussions, and application of knowledge.

In a math class, instead of the teacher delivering a lecture on a new concept during class time, students might watch a pre-recorded video lecture at home. Class time would then be dedicated to working on math problems, engaging in group discussions, and receiving personalized assistance from the teacher. This allows students to learn at their own pace, receive more individualized support, and actively apply what they've learned in a collaborative setting.

5. Experiential Learning

Experiential learning is an educational approach that emphasizes the direct engagement of learners with the subject matter through hands-on experiences. In this method, learning is facilitated by direct involvement in activities, experiments, projects, or real-world scenarios rather than obediently gaining information in a traditional classroom setting.

Experiential learning is grounded in the philosophy that meaningful learning occurs when individuals actively construct knowledge through firsthand experiences, reflection, and application.

This approach fosters deep understanding, critical thinking, problem-solving skills, and personal development by encouraging learners to take ownership of their learning journey and connect theory with practice.

Experiential learning can take various forms depending on the educational context and objectives. It is widely used in fields such as STEM education, vocational training, leadership development, outdoor education, and adult learning programs.

Styles of Experiential Learning

Experiencing: This approach implies that one thrives in collaboration and emotional ties with others, finding significance in firsthand encounters and relationships. Collaborative projects and hands-on activities are perhaps the best ways to learn. Such a style allows one to express oneself since it makes them feel involved, connected, warm, and intuitive.

Imagining: This style, which emphasizes observation and introspection, suggests a predilection for imaginative and compassionate methods of education. One probably likes to think creatively, explore possibilities, and generate ideas.

Reflecting: This approach emphasizes patience and close observation, indicating a propensity for obtaining a variety of viewpoints and data prior to acting. One is more likely to perform well in settings that promote reflection, analysis, and discussion.

Analyzing: It implies a predisposition for assessing experiences, minimizing errors, and checking assumptions since it places a strong emphasis on methodical thought and critical analysis. One is likely to flourish in settings that call for the ability to reason logically and solve problems.

Thinking: This approach implies a preference for employing quantitative tools to convey concepts and for constructing arguments using reasoning and logic. Individuals are inclined to thrive on analytical assignments and take pleasure in participating in thought-provoking conversations.

Deciding: A direct and proactive approach to learning is suggested by this type, which excels at goal-setting and decision-making. You probably like to create specific goals and work methodically to reach them, emphasizing planning and assessment.

Acting: This learning style places a strong emphasis on using an assertive and goal-oriented approach, looking for measurable results under time limits. Individuals are likely to do well in settings that call for prompt decision-making, flexibility, and a sense of urgency.

Initiating: This style implies a predisposition for taking advantage of novel opportunities and thinking quickly, along with an impulsive mindset and a readiness to take chances. People are inclined to flourish in dynamic, uncertain environments where they welcome change and creativity.

Balancing: This approach places a strong emphasis on the capacity to balance advantages and disadvantages, resolve conflicts, and quickly adjust to shifting conditions. You probably do best in circumstances requiring diplomacy, resolving disputes, and identifying points of agreement between opposing viewpoints.

All things taken into account, these learning preferences demonstrate the variety of methods for learning and solving problems, each with unique benefits. We can make the most of our talents, adjust to various learning contexts, and work well with others to accomplish shared objectives by being aware of our own and other people's learning styles.

Conclusion: Innovative pedagogical approaches can help create a student-centered learning environment that fosters creativity, critical thinking, and problem-solving skills. They can also help prepare students for a future that demands adaptability and continuous learning.

In conclusion, the implementation of innovative pedagogical approaches in education fosters a dynamic, inclusive, and student-centered learning environment that nurtures holistic development, fosters creativity, and prepares students for a future that demands adaptability and continuous learning.

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CHARACTERIZING MATHEMATICAL COMMUNICATION SKILLS IN CLASS X STUDENTS: A STUDY ON TWO VARIABLES LINEAR EQUATIONS

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Abstract

The perseverance of this study is to characterize the mathematical communication abilities of class X students and the errors that they made when attempting to solve problems involving the two-variable linear equation system. A qualitative descriptive method was used to carry out in the present study. The subjects in this study were three tenth-grade students from Davanagere with varying levels of mathematical comprehension ability, including one with high ability, one with moderate ability, and one with low ability. To determine how far mathematical communication skills are measured based on indicators of mathematical communication skills, such as 1) the ability to make mathematical expressions, including the ability to state situations, images, diagrams, or real objects into language, symbols, ideas, or mathematical models, 2) The ability to express circumstances or mathematical ideas in the form of visuals, diagrams, or graphs; and 3) the ability to write responses in their native language. The findings revealed that high-ability students performed well in mathematical communication on each indicator, medium-ability students performed well on indicator 1, and student 3 performed poorly on each indicator.

Key Words: *Mathematical communication, linear equation system.*

1. Introduction

Mathematics is a field of study that is studied by all students from elementary, middle to high school. Mathematics is not just a tool for thinking but mathematics as a vehicle for communication between students and teachers with students Mathematics can be considered as a universal language because the numbers and symbols used to do calculations, many problems are conveyed in mathematical language, for example by presenting problems or problems into mathematical models that can be in the form of diagrams, mathematical equations, graphs and tables [1]. Communication can measure student involvement in the learning process [2]. Another view according to Baroody is that mathematical communication is not just expressing ideas through writing but more broadly that is the ability of students in terms of speaking, explaining, describing, listening, asking, and working together [3]. Mathematical communication is the ability to express mathematical ideas coherently to friends, teachers, and others through spoken and written language. By using the correct mathematical language to speak and write about what they are doing, they will be able to clarify their ideas and learn how to make ideas or arguments that are convincing and present mathematical ideas. Mathematical communication skills are a very important part of mathematics and mathematics education with mathematical communication students can share ideas or opinions and clarify understanding [4]. Through the mathematical communication process, students will get used to giving arguments for each answer and giving responses to answers given by others, so that the learning process will be meaningful [5]. explains that there are two important reasons why communication in mathematics needs to be developed among students. First, mathematics as a language, means that mathematics is not just a tool to help thinking, a tool for finding patterns, solving problems, or drawing conclusions, but mathematics is also a valuable tool for communicating ideas clearly, precisely, and carefully. Second, mathematics learning as a social activity, meaning that as a social activity in learning mathematics, mathematics is also a vehicle for interaction between students, and also communication between teachers and students

[6]. Therefore mathematical communication skills need to be developed both in schools and colleges [7]. Even though students' mathematical communication skills are one of the abilities students must have, in reality, there are still many students who are not yet capable of mathematical communication skills. Based on the observations of the researchers the two variables linear equation system. [8] this study stated that the results of students' mathematical communication skills pretest were generally low, namely in the case of algebraic equation modeling where the scores were below average, the indication was that students could not interpret words such as number, difference, less than, and quotient. Besides the difficulties experienced by students of class X of Davangere, the results of the analysis of the two students in mathematical communication skills are students having difficulty in drawing graphs from pair of linear equation in two variable results from one of the students' blank answers, in other words, students cannot do what they want in the problem. [9] Mathematical communication skills of students in one of the secondary schools Davangere, it was found that for indicator 1, in this study students could connect images, diagrams, graphs to mathematical ideas as much as 70% of class students. For the second indicator, in this study that students could explain mathematical ideas in writing with pictures, diagrams, tables, or algebra as many as 13.33% grade students. The third indicator in this study is that students are able to express daily language events or mathematical symbols as much as 26.76% of class students. Thus the mathematical communication skills of Davanagere school students are still low. This fact is a negative perception of mathematics. Based on the background description above, researchers are interested in writing research on the analysis of mathematical communication skills of class X students on the material pair of linear equations in two variables.

2. Methods

This research method is carried out with a descriptive qualitative method. This research describes, records, analyses, and interprets the conditions that occur. The problem described in this study is the students' mathematical communication skills. To describe these abilities, direct observations were carried out by analysing the results of mathematical communication skills tests that were done then conducted interviews and class room interaction. The data of this study were obtained from students of grade X of Davanagere. Determination of the sample using purposive sampling because it does not allow pure randomization, therefore the sample is chosen deliberately and certain considerations. Consideration of research subjects using student learning outcomes in PLETV material that has high, medium, and low grades. So there are 3 subjects in this study. The main qualitative research instrument is the researcher herself, then a simpler instrument will be developed which is expected to complement and compare the data that has been found through observation, classroom interaction and interviews. Data analysis techniques in this study are activities in data analysis. [7] Communication indicators used in analysing are 1) The ability to make mathematical expressions, including the ability to state situations, images, diagrams, or real objects into language, symbols, ideas, or mathematical models 2) the ability to express mathematical situations or ideas in the form of drawings, diagrams, or graphs, 3) The ability to write answers in their own language.

3. Result and Discussion

In this section, the research data will be presented firstly based on the work of T1, T2, and T3 students. Furthermore, the results of this study will be discussed and compared with theoretical questions and student learning outcomes question 1 shows the students' mathematical communication questions in the form of story problems relating cost price of different fruits. question 1: 1 The cost of 2kg of apples and 1 kg of grapes on a day was found to be 160Rs.After a month, the cost of 4 kg apples and 2 kg of

grapes is 300 Rs. Represent the situation algebraically and Graphically. This is problems with daily problems that students are expected to be able to make mathematical expressions, including the ability to state situations, drawings, diagrams, or real objects into language, symbols, ideas, or mathematical models, b. state the situation or mathematical ideas in the form of drawings, diagrams, or graphs.

Answer by T1: $2x+y= 160$

  $4x+2y=300$

Above expressions displays the answers of T1 students, it can be seen the answers of T1 student in question a. which represents the first indicator, that students can to manipulate the meaning of the questions. T1 students can generate ideas for the above story problems by correctly representing the problem in the equation model even though at the beginning of the settlement students do not write information about what is known for example. Based on the results of interviews with high-ability students obtained information that students forget to write examples x and y as apples and grapes This is because students already understand the form of the questions so they want to immediately write down the completion of the answers, so they tend to be in a hurry. After question b, which represents the second indicator, which states the situation, or mathematical ideas in the form of pictures, diagrams or graphs. T1 students can to draw graphs by determining the coordinates of points that the graph must pass correctly.T1 students are able to interpret each stage of completion of the answer by using elimination and substitution correctly, then students can associate what is desired in the problem with their language even though the language used is very short.
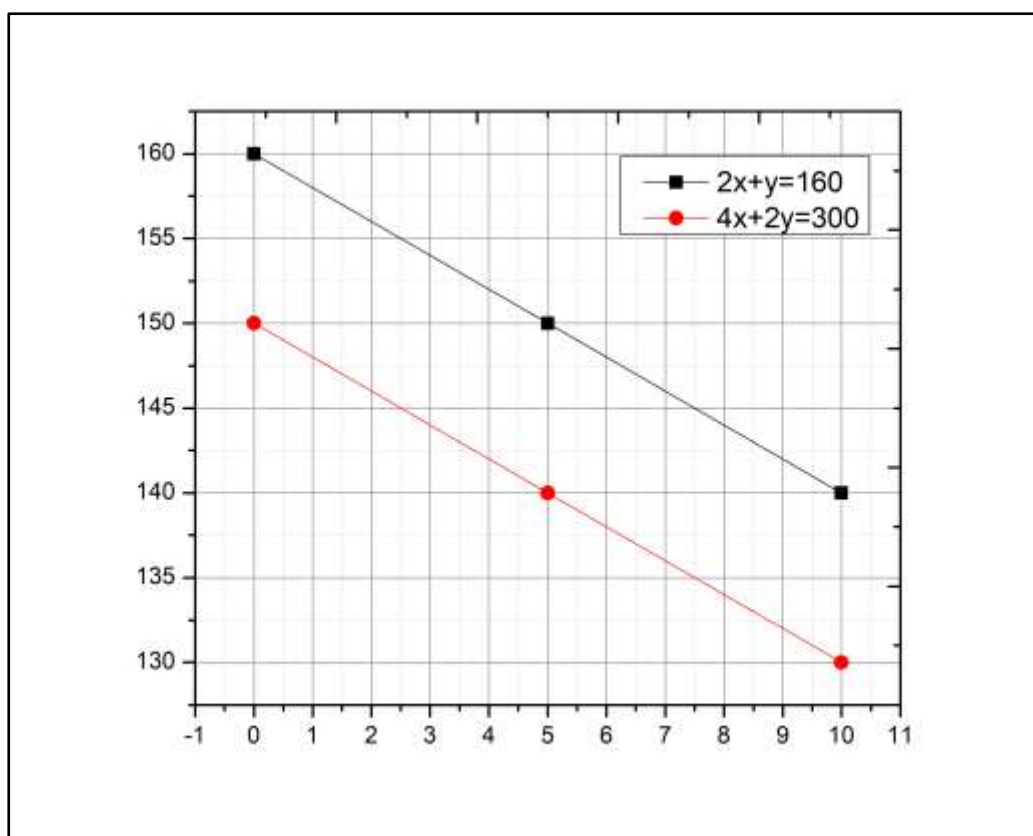
Fig.1. Graphical representation of question1 by T1

Below is the mathematical communication skill of student T2

Answer by T2: let us consider apple as 'x' and grapes as 'y'

Then   the cost of 2 kg apple and 1kg grapes=160 Rs.

$$i.e\ 2x + y = 160 \text{, and}$$

The cost of 4 kg apple and 2 kg grapes is 300 Rs.

$$i.e\ 4x + 2y = 300$$

Therefore the Pair of linear equation for the given problem is

$$2x + y = 160$$
$$4x + 2y = 300$$

T2 students can be able to manipulate the meaning of these questions. By involving examples of what are known to be mathematical symbols and generating ideas for the above story problems by representing the problem into the equation model correctly by analysing the question step by step students of T2 can answer well. But in the matter b. which represents indicator 2, namely expressing a mathematical situation or ideas in the form of pictures, diagrams, or graphs. Based on the results of interviews with medium-capable students that T2 students do not know the steps in making graphics, including students not being able to determine the cut point.T2 students do not know to finding the corresponding values of x and y by substitution or by cancellation method. Mathematical communication skills of students (T3) showed.

Answer by T3: He couldn't able to understand the problem how to draw inference by the given data in the story sum. He literally needs direct algebraic expression to get the values. then only he could able to solve the problem.

The mathematical communication skills of students of S3 students from the results of answers S3 students have difficulty understanding the terms to be searched into the variable form so that questions that represent the first indicator is not achieved properly. Based on the results of interviews with T3 students obtained information that students understand the concept of variables but students have difficulty changing story problems into mathematical sentences so that they cannot make mathematical models correctly. In problem b, T3 students were not able to determine the coordinates of two points from a graph. This results in T3 students wrong in determining the expected cut point and image. Based on the results of T3 student interviews obtained information students are not able to master the concepts and procedures and are still confused with the concept of making graphics, to make conclusions using the language itself. Based on the interview results obtained information that students do not understand the questions given so do not master the principles in solving story problems

4. Conclusion

Two of the three students demonstrate a relatively high level of mathematical ability on the first indicator, which is the ability to create mathematical expressions. This includes the ability to translate situations, pictures, diagrams, or actual objects into language, symbols, ideas, or mathematical models. Furthermore, only really proficient pupils are able to fully and accurately solve the second and third indications, which are the capacity to describe mathematical circumstances or concepts in the form of drawings, diagrams, or graphs and the ability to write solutions in their language. Students with low ability cannot answer the questions. The study results show that students at Davangere School have not been able to develop high-level mathematical thinking skills, particularly in mathematical communication.

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DIGITAL EDUCATION: OPPORTUNITIES AND CHALLENGES

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Abstract

National Education Policy 2020 documented the significance of digital education in given that quality education for all. Education is the procedure of facilitating learning, attainment of knowledge, skills, principles, attitude, habits etc. to give in socio-economic enlargement of nation. Digital education is a multifaceted multidimensional topic which uses digital technology and tools in teaching and learning procedure. Digital education provides a lot of opportunities to both teachers as well to their students. Students as well as educators are vigorously and easily engaged with each other through email, messages, video chat, online forums, social media, learning materials etc. Shortly, the educational arrangement environments are anticipated as mitigation to unexpected natural and mock pandemics such as Covid-19 in 2020 by the major changes connected with the digitalization of some portion of the system. It also allows educational programmes to be available 24/7 in dissimilar languages to carter to the varying requirements of the learners. Though digital education has supplementary benefits but it also has many prospect challenges in India. Worldwide, the digital revolution favored open access to information. Classrooms today have a lot of ICT resources almost all the teachers have made huge strides to incorporate digital technology to boost access to information and two-way activities for the learners. This article aims to give valuable perspectives of Information and Communication Technology and digital education into its future reimbursement, risks, and challenges of acceptance the latest technologies in the digital era, and vast online open courses. Further research and novelty in technology will restore the digital education system. Thus digital education will efficiently supports the classroom Challenges.

Keywords: Digital education, information and communication technology, e-learning, virtual learning

Introduction

Digital education is mainly a result of the earlier period few years, though it has previously existed slightly earlier in various ways. It is clear; however, that contemporary equipment and means of transmitting information are significant for its growth. Therefore, without the fast progress of computers and the Internet, this form of education would not be possible. It can be incidental that they were principally concerning digital education and in some way forced its beginning because the propagation of computers and broadband Internet gave a very strong momentum to use them in educational activities as well. As a result, interactive classes, contemporary e-learning courses, instructive games, electronic assessments, instructive resource portals, and learning process administration systems have entered into daily continuation today.

Digital Education

Education is the procedure of facilitating learning, achievement of knowledge, skills, values, beliefs, habits etc. Education is not only limited to textbooks and classrooms teaching but also engage the integration of new technologies, tools, inventive ideas and e-content in teaching learning process, and Digital education is meant by the make use of digital tools and technology as well as the internet and other Information and Communication Technology devices in an inventive manner to improve the teaching and learning practice to make education more interactive, immersive, extensive, and inclusive. Digital education is as well known by popular names such as e-Learning and Technology improved learning.

Digital education also covers the terms such as Technology Enhanced Learning (TEL) or digital learning or e-learning. Digital education insures the make use of and complexity of digital

technologies for teaching and learning process within a society. These digital technologies requires suitable infrastructure to hold up such education.

Digital learning is not a innovative concept but its consequence was increased various after COVID-19 pandemic. Most of instructive institutions are adopting digital education as resolution for traditional education process of chalk and talk. Developing technology and elevated speed internet made learning interactive, engaging, motivating and handy. In near prospect, digital education will play major role in learning process through the Government policies for efficient implementation and acceptance by educational institutions.

Significance of Digital Education

Digital education provides a lot of opportunities to instructor to engage their learners. Learners and teachers are actively occupied with each other through email, messages, video chat, online forums, social media, learning resources etc. with expediency of time and place. Rosemarie M (2022) highlighted that the digital education is more available and provides personalization as well as litheness of learning material to the learners. Significance of digital education in current days are as follows;

a) Convenience - Digital education provides a chance to access educational assets at the time and place which are suitable to the learner as well as teacher. This can hold up lifelong learning and help to broaden access of education. Online and blended form of learning can increases convenience of education for those students who live at far-away places from instructive institutes or have work or carrying other household tasks.

b) Personalization - Learning resources in digital formats enables personalisation of these resources through the settings of the technology used for right to use. This makes it easier for the beginner to access and make use of the resources as per convenience and require.

c) Flexibility - Digital technologies as well provides affordances as well as the capability to provide learning material in diverse formats, modes or languages to interrelate synchronously as well as asynchronously with learners across the globe.

Benefits of digital education system in India

1. Digital education makes learning process supplementary mobile, interactive, engaging and motivating. Digital set-up allows instructors to modify the study material based on an individual's learning rate and capability and overcome the disadvantage of student interest in customary education system.

2. Students gets uncovered to new learning tools and technology and develop successful self-directed learning skills which considerably magnifying their competence, learning ability and efficiency.

3. Digital technology changed the regular classroom sitting in to an interactive digital session.

This can make students pay more attention as they are extensively recognizable with the digital globe.

4. Previously, students would rely on imperfect sources of information but now the planet of the internet is huge and encumbered with information and most of which is also freely accessible. Therefore, the appearance of digital education has made it probable for students to discover and use this treasure of acquaintance.

5. It allows simple preserving and sharing information by right away a click than maintaining in form of hand-written observations, proof reading notes, little hand notes etc. This allows saving the time and physical labor work of learners.

6. The digital education system brings learners out of their shells and makes them self-governing thinkers about what to study, when to study and how to study thereby curtailing the dependence on their instructors and parents.

7. Allows educational programmes to be made obtainable 24/7 in diverse languages to provide to the varying requirements of the student.

8. Digital learning can be without difficulty made possible with use of internet on the strategy such as mobiles, tablets, desktops, laptops, etc. by students.

9. It has been confirmed appropriate education system in circumstances such as epidemics and pandemics where conventional education system is balanced.

Initiatives for Digital Education in India

In its mission for the universalization of digital education in the nation the Ministry of Education has launched the following significant initiatives for promoting digital education in India:

I. DIKSHA

The full figure of DIKSHA is Digital Infrastructure for Knowledge Sharing. It is a nationwide platform for revolutionizing school education in the nation. DIKSHA is a proposal of National Counsel of Educational Research and Training under the Ministry of Education launched in 2017.

Highlights

- ✓ DIKSHA ropes 36 Indian languages and can be accessed crosswise India by instructors and learners at any time.
- ✓ DIKSHA has supple and user-friendly policies and tools which make it probable for the whole education ecosystem to contribute and influence the platform for achieving learning goals.
- ✓ DIKSHA has also been affirmed a One Nation One Digital dais under the Atma Nirbhar Bharat Abhiyan.
- ✓ Building blocks of DIKSHA comprise energized textbooks, online courses, contented sourcing, contented authoring, interactive quizzes, talk boats, inquiry banks, etc.
- ✓ DIKSHA also hosts a huge number of auditory books, dictionaries, and videos of Indian Sign Language (ISL) in order to assist the learning of children with individual needs.
- ✓ DIKSHA Android app offers a huge learning experience through which instructors and students can right to use the contents of a textbook by scanning the QR code provided on the book.

II. Prime Minister e-VIDYA

Prime Minister e-Vidya was announced in the financial plan 2022-23. It is a digital education stage launched by the government of India under which the pinnacle 100 universities of India will instruct the students through online platforms.

Highlights

- ✓ Prime Minister e-Vidya facilitates multimodal right to use to online learning teaching contented among students as well as teachers.
- ✓ A high-class curriculum-based educational contented is telecasted on the 12 e-Vidya channels. The video content is developed in Hindi as well as English medium.
- ✓ For students from classes 1st standard to 12th standard there will be a enthusiastic earmarked channel for each class.
- ✓ E-Vidya will eventually benefit 25 crore school-going pupils across India.
- ✓ Beneath this program, Digital Universities beside with e-labs and e-prayogshalas will also be recognized for science and math students.

III. SWAYAM

SWAYAM is a Government of India plan designed for the accomplishment of three fundamental principles of education policy - quality access and impartiality. Its purpose is to provide the most excellent teaching and learning resources to all including the majority deprived sections of society. Swayam hosts all classroom courses from class 9th till post-graduation at no cost.

IV. SWAYAM PRABHA

Inaugurated in 2017 SWAYAM PRABHA is a collection of 32 Direct to Home (DTH) channels that broadcast 24/7 first-class educational programs.
SWAYAM PRABHA operates using the satellite GSAT-15.

- ✓ The stage daily hosts new contented for at least 4 hours which is then frequent five times a day which allows learners to decide a suitable time for their studies.
- ✓ Contents are first and foremost provided by pinnacle Indian educational institutions including Indian Institute of Technologies, University Grants Commission, Indira Gandhi National Open University, National Institute of Open Schooling, National Counsel of Educational Research and Training, and NPTEL.
- ✓ The free DISH subscribers of Doordarshan can sight these channels without charge without any additional speculation.
- ✓ For 1st standard to 10th standard a daily 2 hours broadcast is scheduled while for classes 11th and 12th a 3 hours broadcast is done on SWAYAM PRABHA DTH channels.

V. E-Pathshala

E-pathshala was launched in November 2015 e-Pathshala was a web gateway of NCERT hosting educational resources for learners, parents, teachers, educators, and researchers through mobile apps urbanized for Android, Windows, and I-phone Operating System platforms.

- ✓ E-pathshala contains textbooks and e-books in the form of turn over Books and e-pubs 3.0 in Hindi, English, and Urdu languages.
- ✓ E-pathshala was a joint proposal of the Ministry of Education and NCERT for disseminating a showcasing all the e-resources of education including textbooks, videos, audio, and a variety of other digital assets.
- ✓ E-pathshala was also considered with an aim to attain Sustainable Development Goal number 4 which is excellence, comprehensive and evenhanded education and lifelong learning for all and bridging the digital split.
- ✓ E-pathshala ropes interactive features for learning like zoom, selecting, navigating, and making digital explanation.

VI. NISHTHA

The complete form of NISHTHA was National Initiative for School Heads and Teachers' Holistic Advancement.

- ✓ It is an incorporated program for the training of instructors for improving the excellence of school education in India.
- ✓ As per the NEP-2020 recommendations - every Head Master and teacher was predictable to contribute every year in at least 50 hours of Continuous Professional Development (CPD) opportunities.

Challenges with digital Education

Certainly there are many benefits of digital education in India but that does not offer us the liberty to fail to notice the challenges of this new and rising system of education. Following are a number of the challenges faced by Digital education in India.

➢ *Digital split*

- When we believe of digital education a few essential things come to mind like- the internet, technology, and gadgets.
- Paradoxically these basics are not accessible to a preponderance of rural Indians who accounts for almost 69% of the Indian inhabitants.
- The majority people are not recognizable with the technology and do not have the access to the gadgets requisite for learning through Digital education.
- Furthermore there is a huge part of the country where usual high-speed internet connectivity has still not been reached.
- All these comprise the digital split present in urban and rural and wealthy and deprived India which is the key hurdle for Digital education in India.

➢ *Language fence*

- India was a country with enormous linguistic diversity. There were 22 scheduled languages in the nation along with many other vital languages.
- This presents a rigid challenge as the preponderance of the contented available on digital platforms was either in Hindi or English language.
- This first and foremost affects school pupils who are much supplementary comfortable in their mother language or native language.

➢ *Children with special needs (CWSN)*

- Children with special needs necessitate a special kind of concentration and care in education.
- Furthermore teachers also require to be trained in Indians Sign Language and extra modules to attach correctly with these specially-abled children.

➢ *Be short of Training and Communication*

- In sort to explore digital education one has got to be trained in agreement with the technology being used to get the maximum advantage out of it.
- Honestly, the majority of teachers were not fully trained to educate on digital platforms and as a result face stable problems while taking classes.
- This also disturbs the beat of students and makes the whole knowledge boring which was otherwise predictable to be a fun learning practice.

➢ *Health Issues*

- Digital education requires elevated screen time which puts a set of stress on the eyes.
- Pupils less than 6 years of age are more flat to developing eye-sight-related troubles due to this issue.
- As well, there were other issues counting headaches, and wrong bearing resulting in neck ache and back pain

Conclusion

Digital education has the possible to transform the entire education sector of the nation and transform India into an acquaintance economy. The require of the hour is to stick to the fundamentals and stay abreast with continually evolving digital education technology and better internet communications clubbed with available and reasonable gadgets will keep India on the right pathway to attain universal education. We expect all our misgivings regarding Digital Education in India are vacant.

Digital education is supplementary accessible, flexible, inspiring and time retentive providing diversity and quality in learning material to the learners at their place and time. Although digital education is originated to be helpful in many ways, it has a lot of challenges in India. Formation of well-organized online contented, their digital storehouse and mode of release to learners through the formation efficient transportation and technology are some of the main challenges which requirements are tackled in the new age of digital education. More research and novelty in technology will refurbish the digital education system in India.

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EFFECT OF BLENDED LEARNING ON ACADEMIC ACHIEVEMENT IN KANNADA SUBJECT OF HIGHER SECONDARY SCHOOL STUDENTS OF GADAG DISTRICT

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Abstract

In this study, the effects of blended learning on the Higher Secondary school students' academic achievement level were investigated. This study was carried out with a total of 60 students enrolled in the experimental group and control group in the 11th grade classrooms during the academic year 2023-24 school years in a Higher Secondary school in Gadag District. The intervention lasted 8 weeks. During the eight weeks, the units of Kannada subject are taught through blended learning environment. The experimental group was taught using blended learning environment and control group was taught using traditional method. The design of the study includes quantitative method. We collected quantitative data such as academic achievement test. Kannada Academic achievement test scale was used as quantitative data collection sources. Quantitative data was collected through the evaluation of students' the academic achievement test answer scripts. The independent t-test and r-test tests statistical techniques were used. As a result of this study, it is concluded that blended learning environment had generated a significant difference in students' academic achievement in Kannada on behalf of experimental group.

Keywords: Blended Learning, Instructional Method, Higher Secondary school, Experimental and Controls group, Kannada subject

1.   Introduction:

Blended learning is a combination of traditional face-to-face classroom learning and online/remote learning. There are many different models of blended learning, and the exact combination of traditional and remote learning will look different for each teacher and for their students. Student self-regulation of learning is important in a blended learning environment and students participate in determining how, when, and where they complete some of their learning. Blended learning can improve students' independence and self-agency. Nevertheless, a strong teacher presence is important to help guide learning and to support students in their growth as reflective, engaged, active learners.

2.   Blended learning:

There are given many definitions in different sources. According to Graham.Ch et al (2019) "Blended learning is strategic combination of online and in-person instruction." Russel T. Osguthorpe and Charles R. Graham in 2003 stated that Blended learning links face-to-face to distance conveyance framework, however, it is more than demonstrating a page from a website on the screen… the ones who utilize blended learning environments are attempting to boost the advantages of both face-to-face and online techniques. "Blended learning is the thoughtful integration of classroom face-toface learning experiences with online learning experiences" claimed Garrison and Kanuka (2004). "Blended learning combines online instruction components with those found in traditional face-to-face instructional environments" argued Dr. Ranjana Bhatia. John Watson stated "Blended learning, combining the best elements of online and face-to-face education, is likely to emerge as the predominant teaching model of the future". It can be concluded that Blended learning is integrating traditional face-to-face learning with technology and distance learning.

3.   Significance of the study:

The significance of the present study is as follows:

1) The present research will be use full for all the Secondary of education and it will also contribute to the knowledge of teacher and students.
2) The present research will make teaching & learning more effective.
3) The present research study will increase the curiosity and interest among the teachers. It is also a path for the scholars in this area.
4) The present research is important to increase computer literacy in society.
5) The present research is helpful to increase student's audio and visual competency.
6) It will correlate the study in geography subject, concepts and related day today teaching.
7) The present research also important as the multimedia package, to be used to acquire the knowledge and the interest in geography subject.
8) The system will be helpful for the distance learning mode and in-service training

4.   Statement of the Problem:

EFFECT OF BLENDED LEARNING ON ACADEMIC ACHIEVEMENT IN KANNADA SUBJECT OF HIGHER SECONDARY SCHOOL STUDENTS OF GADAG DISTRICT

1.   Objectives:

1) To study the effectiveness of blended learning to academic achievement in Kannada Subject of higher secondary school students.
2) To compare the effectiveness of traditional teaching method & teaching with blended learning on Academic achievement in Kannada Subject of Higher secondary schools of Gadag District.

2.   Hypothesis:

1) There is no significant difference between the Academic performance of the students from control and experimental group in pre- test.
2) There is no significant difference between the Academic performance of the students from control and experimental group in post- test.
3) There is no significant relationship between the Academic performance of the students from control in pre-test and post- test.
4) There is no significant relationship between the Academic performance of the students from experimental group in post- test.

3.   Design of the study:

4.1. Research Methodology:

In this study applied experimental method. The randomized control group pretest-posttest design was used. Students were divided into two groups, experimental group and control group. Both of the groups were given different treatment. In experimental group teacher used blended learning model (part online, part face to face), while in control group traditional learning model was used.

4.2.   Population and Sample:

The population in this study consisted of all of students enrolled in the 9th standard in 2023-24 academic year. Selecting of sample used random sampling technique. There were 60 students in the experimental group and 60 students in the control group.

4.3.   Research Tools:

The research tool is in form of multiple choices was conducted to collect data. Before the tests were given, a trial test including 65 questions was established. After analyzing the question items which include the validity, difficulty index, discrimination index and reliability, there were 50 questions were used to achievement test. Then, both groups were given the same pre-test and data obtained were analyzed to look at the students' initial ability. Furthermore, each group was treated differently. At the end of the learning both two groups will equally given post-test to see the results of the learning model that has been given. The data obtained were analyzed to know the normality and homogeneity. Finally, a t-test for independent samples was conducted.

4.4.   Preparation of Tools:

Achievement Test (pre- and post- test) related to Physics subject: Two tests i.e. pre and post- test prepared by the researcher in Kannada subject. These tests covered basic knowledge in Physics subject for IX Std. Each test consists of 50 items. These items were of multiple-choice types. Each question carries 2 marks for correct alternative and 0 marks for incorrect alternative.

4.   Analysis and Interpretation of the Data:

Table-1: Comparison of average of learning outcomes in Pre-test and post test of both groups

Group	Pre-test	Post-test
Control Group	30.5	60.2
Experimental group	35.2	84.1

Based on the test were given to both of the sample groups, the average of learning outcomes in experimental group was 35.2 for pre-test and 84.1 for post-test. While in control group the average scores was 30.5 for pre-test and 60.2 for post-test. Those result can be seen in graph-1.

Graph-1: Comparison of average of learning outcomes in Pre-test and post test of both groups
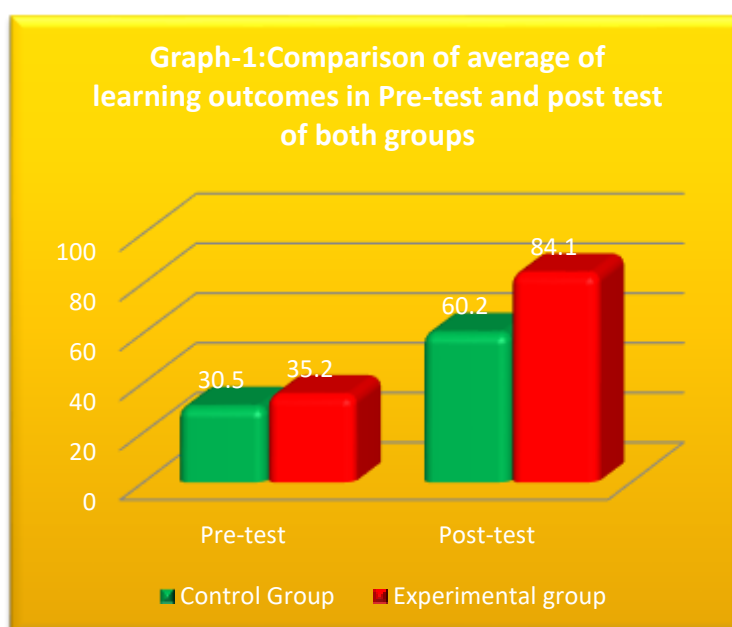
1) **Hypothesis-1: There is no significant difference between the performance of the students from control and experimental group in pre- test.**

   To investigate the effect of blended learning model in terms of students' achievement, in comparison to traditional instruction, this study conducted a t-test analysis for independent sample.

Table No.-1: Total score obtained by all students in Pre-Test Observation and Interpretation:

Measure	Control group	Experimental group
Number of Student (N)	60	60
Mean (M)	30.5	35.2
S.D.	10.24	8.45
Difference in Mean	4.7	
t value	1.62	
Df	118	

Based on the result on the table above, it can be interpreted that there was no significant difference t = 1.62, sig >0.05) between the experimental group and control group scores. It states that the students in the experimental group and control group had similar levels of academic achievement. The above data can be represented by the bar diagram as follows:
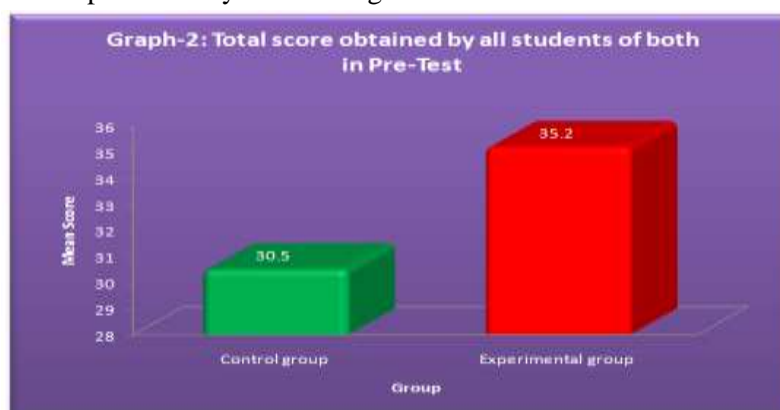
2) **Hypothesis-2: There is no significant difference between the academic achievement of the students in Kannada Subject from control and experimental group in post- test.**

At the end of application, the post-test score of the two groups were analyzed. The finding was obtained and it is presented in Table 2 below:

Table No.-2: Total score obtained by all students in Pre and Post Test Observation and Interpretation:

Measure	Control group	Experimental group
Number of Student (N)	60	60
Mean (M)	60.2	84.1
S.D.	8.45	7.56
D- Mean	23.9	
t value	7.561*	
Df	118	

The findings are stated on the basis of null Hypothesis, there is no significant difference between two groups so null hypothesis should be rejected as the calculated t-value (8.786) is greater

than the table t- value (2.640) at 0. 01 significance level is remarkable. This shows that the Blended learning module effects on performance of twelfth standard students in Physics subject.

Graph-3: Total score obtained by all students of both in Post-Test
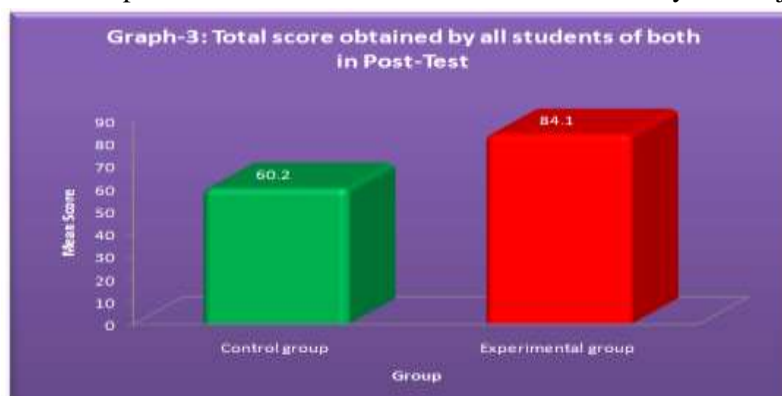
3) **Hypothesis-3: There is no significant relationship between the performance of the students in Kannada subject from control in pre-test and post- test.**

Hypothesis-4: There is no significant relationship between the performances of the students in Kannada subject from experimental group in post- test.

Frequency distribution of total score obtained by students in the pre and post - test regarding effectiveness of Blended learning is as follows:

Table No.-3: Total score obtained by all students of both groups in Pre and Post Test Observation and Interpretation:

Group	Measure		r-value
Number of Student (N)	60		60
Control group	Pre-test		0.584
	Post-test		
Experimental group	Pre-test		0.789
	Post-test		

The findings are stated on the basis of null Hypothesis, there is no significant relationship between the performance of the students from control group in pre-test and post- test so null hypothesis should be rejected as the calculated value (0.584) is greater than the table value (0.231) at 0. 01 significance level is remarkable.

The findings are stated on the basis of null Hypothesis, there is no significant relationship between the performance of the students from experimental group in post- test so null hypothesis should be rejected as the calculated value (0.789) is greater than the table value (0.231) at 0. 01 significance level is remarkable

This shows that the Blended learning module effects on performance of twelfth standard students in Physics subject.

5. **Findings:**
   1) Finding out how the blended learning paradigm affected students' academic performance was the goal of this research. A comparison was made between the experimental and control groups' scores on the learning objective test. Students' learning outcomes differ; on

average, the experimental class outperforms the control class in terms of learning outcomes.

2) Another finding indicated that employing blended learning significantly improved student learning outcomes in information and communication technology courses. The results of the study showed that compared to the traditional learning model, the blended learning approach increased students' success. Teachers can assist students' learning accomplishment by implementing blended learning as an alternate learning approach.

3) Teachers should increase their rate of computer and internet literacy before putting this concept into practice. It is imperative that schools offer workshops or training to instructors so they can utilise this concept effectively.

4) The scope of this research is presently restricted to information and communication topics; it is hoped that more research for other courses will be undertaken and that a consideration of how to effectively integrate in-person and virtual learning will be included.

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THEME 3

THEME - 3

THE PSYCHOLOGY BEHIND GAMIFICATION: INCREASING INTRINSIC MOTIVATION IN EDUCATIONAL SETTINGS

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Abstract

Gamification, the application of game-design elements in non-game contexts, has become an increasingly popular strategy in educational settings. It leverages the motivational aspects of games to engage learners, fostering both intrinsic and extrinsic motivation. This paper explores the psychological mechanisms behind gamification and its impact on increasing intrinsic motivation in educational environments.

At the heart of gamification is the theory of intrinsic motivation, which is driven by an individual's internal desire for mastery, autonomy, purpose, and relatedness. Points, badges, leaderboards, and other game mechanics are discussed as tools to satisfy the need for competence, by providing clear goals and immediate feedback, as well as the need for autonomy, by offering students choices and the ability to navigate their learning paths. Additionally, elements such as collaborative challenges address the need for relatedness by fostering social connections among learners.

While gamification can successfully boost motivation, there is a fine line between using game elements to encourage intrinsic motivation and fostering a reliance on extrinsic rewards, which may undermine long-term engagement. The paper discusses the potential risks associated with over-reliance on extrinsic motivators like rewards and competition, which can diminish the self-driven aspect of learning. This highlights the importance of designing gamification systems that prioritize intrinsic motivators, ensuring that game mechanics enhance, rather than replace, the inherent satisfaction of learning.

The paper concludes with recommendations for educators and designers on how to create gamified learning experiences that nurture a deep, lasting engagement with educational content by tapping into learners' intrinsic motivations, ultimately promoting better learning outcomes and a more enjoyable educational experience.

By blending psychological insights with practical strategies, this paper contributes to the ongoing discussion on optimizing gamification for educational purposes.

Introduction

People play games while travelling, unwinding, or at work to generate delightful experiences. In the modern-day, where social media and digital technology mediate most of what we do, many firms shift that behaviour by transforming routine tasks into rich, fun, gaming-like experiences. This process is called gamification.

In recent years, the concept of gamification—the application of game design elements in non-game contexts—has gained traction as a powerful tool in educational settings. By integrating elements such as points, leaderboards, challenges, and rewards into the learning process, gamification seeks to enhance engagement, motivation, and overall learning outcomes. This article delves into the psychological mechanisms underpinning gamification and explores how these mechanisms can be leveraged to foster intrinsic motivation in students.

Understanding Gamification

Gamification is not about turning learning into a game but rather about borrowing elements from game design to make educational experiences more engaging. Effective gamification taps into fundamental psychological needs, such as the need for competence, autonomy, and relatedness—as described in Deci and Ryan's Self-Determination Theory (SDT).

Key components of gamification in education include:
1. **Points and Rewards:** Acknowledging achievements.
2. **Leaderboards:** Fostering a sense of competition.
3. **Badges:** Offering symbolic recognition.
4. **Levels and Progression:** Indicating growth and mastery.
5. **Challenges and Quests:** Introducing problem-solving scenarios.

Each of these elements plays a role in influencing students' motivation and behavior, but their effectiveness hinges on aligning with intrinsic motivational drivers.

The Role of Intrinsic Motivation

Intrinsic motivation refers to the drive to engage in an activity for its inherent enjoyment or satisfaction rather than external rewards. In educational settings, intrinsic motivation is critical for sustained engagement and deep learning.

Self-Determination Theory (SDT)

Deci and Ryan's SDT posits that intrinsic motivation flourishes when three basic psychological needs are met:
- **Competence:** The need to feel effective and achieve mastery.
- **Autonomy:** The need to have control over one's actions and decisions.
- **Relatedness:** The need to feel connected to others.

Gamification strategies that address these needs can transform the learning experience. For instance, allowing students to choose their "quests" (autonomy), designing tasks that offer a sense of accomplishment (competence), and encouraging collaborative challenges (relatedness) can significantly boost intrinsic motivation.

Psychological Mechanisms Behind Gamification

1. Operant Conditioning

Gamification often employs principles of operant conditioning, where behaviors are reinforced through rewards. For example, earning points for completing a task reinforces the behavior, making students more likely to repeat it. However, excessive reliance on extrinsic rewards can undermine intrinsic motivation if not carefully balanced.

2. Flow Theory

Mihaly Csikszentmihalyi's concept of "flow" describes a state of deep focus and enjoyment in an activity. Gamification can create conditions for flow by offering clear goals, immediate feedback, and appropriately challenging tasks. When students enter a state of flow, they are intrinsically motivated and deeply engaged in the learning process.

3. Social Comparison and Competition

Leaderboards and competitive elements tap into students' natural tendency to compare themselves with peers. While this can motivate some students, it is crucial to ensure that competition does not lead to demotivation or feelings of inadequacy among others.

4. Narrative and Storytelling

Integrating narratives into gamified learning environments can make tasks more meaningful and engaging. For example, framing a history lesson as a "mission" to uncover ancient secrets can spark curiosity and excitement, enhancing intrinsic motivation.

Applications in Educational Settings

1. K-12 Education

Gamification can make traditional subjects like math, science, and language arts more interactive. Tools like Classcraft and Kahoot! integrate game mechanics to encourage participation and collaboration among younger students.

2. Higher Education

In higher education, gamification can address the challenges of self-directed learning. Platforms like Duolingo and Codecademy use gamified elements to help learners stay motivated while mastering new skills.

3. Corporate Training

Even in adult learning and professional development, gamification has proven effective. Simulated environments and reward systems are used to teach complex skills, from programming to leadership.

Challenges and Criticisms

While gamification has shown promise, it is not without challenges:

1. **Overemphasis on Rewards:** Over-reliance on extrinsic motivators can diminish intrinsic motivation.
2. **One-Size-Fits-All Approach:** Not all students respond equally to gamified elements.
3. **Complex Implementation:** Designing effective gamification systems requires significant effort and expertise.

Strategies for Effective Gamification

To maximize the benefits of gamification, educators should:

1. **Focus on Intrinsic Motivation:** Ensure that gamification elements align with students' psychological needs.
2. **Personalize the Experience:** Adapt gamified activities to individual preferences and learning styles.
3. **Encourage Reflection:** Allow students to reflect on their progress and accomplishments.
4. **Balance Competition and Collaboration:** Create opportunities for both individual and team-based achievements.

Conclusion

Gamification, when thoughtfully implemented, has the potential to transform education by tapping into the psychology of intrinsic motivation. By aligning with fundamental human needs for competence, autonomy, and relatedness, educators can create learning environments that are not only engaging but also deeply fulfilling. As technology continues to evolve, the possibilities for gamified education are boundless, offering new ways to inspire and empower learners of all ages.

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A COMPARATIVE STUDY OF SOCIAL AND EDUCATIONAL ADJUSTMENT OF MALE AND FEMALE ADOLESCENCE STUDENTS

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Abstract

This paper attempts to understand and analyze the social and educational adjustment ability among adolescence in Satara City. Present study classify adjustment in two important Categories i.e. Social adjustment and emotional adjustment. The method used in the study was a survey. A Survey was taken on near about 475 (188 male & 287 Female) samples. The result reported that there were significant difference in Social and educational adjustment among adolescence.

Key Words - *Adolescence, Social adjustment, Educational adjustment*

1. Introduction:-

Adolescence is the most important period of human life. Poets have described it as the Spring of life of human being and an important era in the total life span. The word adolescence comes from a Greek word 'adolescere' which means 'to grow to maturity'. This period runs between childhood and adulthood and is sometimes called the period of teenage

According to A T. Jersild, "Adolescence is that period of years during which boys and girls move from childhood to adulthood, mentally, emotionally, socially and physically"

Jean Pinget defined adolescence as, "the age of great ideals and the beginning of theories as well as the time of sample adaptation to reality."

Adjustment and Adolescence:-

Human beings are almost always in the process of adjustment. Adjustment can be defined. "The relationship among the biological heritage or organism, the environment and the personality. In simple words, adjustment is an all inclusive term meaning relationship between an individual and his environment through which his need are satisfied in accordance with recent Conditions. Erik Eriksan also considered, "Adjustment as a life-long process. The basis of mental health is the mastery of crises at Successive life stages"

Adolescence is a transitional period, it is characterized by Problems and feelings of instability, it is a period of heightened emotionality, storm and stress While living in the Sociatical world their personality leads to maladjustment, such as irresponsibility, feelings of insecurity, regression, or the use of defense or escape mechanism So they need by the guidance about the self-adjustment, socialical adjustment So this study gave an emphasis on adolescence's social and educational adjustment

2. Literature Review:-

In the present study following research based review ware taken.

1. Drug problem in adolescence & their adjustment (Hawkins J. David, 1992),

2. Social and emotional adjustment of extremely talented in verbal or mathematical reasoning (Brody, Linda, pearson, 1986),

3. Peer relationship and adjustment at school (Rayan & land, 2012),

4. Gender wise adjustment study of high school students (Gehlawal, Manju, 2011), 5. Social & Psychological adjustment of adolescence related to family emotional expressiveness (Fitzgerald & Briones, 1993)

From all the above review, we can conclude that, adolescence is the period of transitional, it's a period of change and it's a age of dreaded. That is why adolescence has faces many social, emotional problem while living in the society.

3. Rational of the study:-

Present study tries to understand and to analyze the adjustment of Adolescence. This study classified adjustment in two important Categories. i.e. social and educational adjustment. This study used a standardize test of adjustment of Dr. M. N. Palsane, administered on 5 colleges (Arts stream) in Satara City. By randomize. The main purpose of this study is to examine the current social and educational adjustment ability of adolescence.

4. Objectives of the Study:-

1. To study the social adjustment among adolescence.
2. To study the educational adjustment among adolescence.
3. To Compare Social adjustment among adolescence girl and boys.
4. To Compare educational adjustment among adolescence girl and boys.

5. Assumption of Study:-

1. Adolescence has social and educational adjustment ability at certain level.
2. Adolescence have problem in social and educational adjustment.

6. Hypothesis of Study:-

1. There is no significance difference in social adjustment between adolescence girl and boys.

7. Need of study:-

Adolescence is the age of growing towards maturity. It is the process to become a complete man and it's happened gradually. Adolescence is neither a child nor a adult, so they doesn't understand how to behave in family as well as society. Its affect on their social and educational adjustment and this type of maladjustment affect on their career.

So present study has importance to examine the recent adjustment (Social and Educational) of adolescence.

8. Importance of study:-

1. This study helps us to know the present social and educational adjustment ability or adjustment problem of adolescence.
2. This study helps us to know the causes of maladjustment (Social and educational) of adolescence.
3. This study helps us to know how to implement the social and educational adjustment enrichment programme for adolescence.

9. Scope of Study:-

The conclusions from the present study is applicable to all Arts stream of colleges

10. Limitation of study:-

1. The present study is limited to Satara City.
2. The present study is limited to Arts stream academic colleges.
3. The present study is limited to co-educational academic colleges.
4. The present study is limited to B.A. I and B.A. II class of Arts stream.

11. Method of study:-

In the present study survey method was followed.

12. Variables of study:-

Independent Variable:-

In the present study standardized Adjustment Inventory is the independent variable.

Dependant Variable:-

In the present study controlled variables were medium, stream and class.

Controlled Variable:-

In the present study controlled variables were medium, stream and class.

13. Sampling:-

Population:-

In the present study researcher selected co-educational arts stream academic colleges in Satara City.

Sample:-

The sample consists of 475 students of B.A.I & II class from different colleges in Satara City. Out of which 188 were male and 287 were Female. The sample was collected by using random sampling technique

14. Administration:-

The scale was administered in groups in regular classroom situation. The instructions were provided in the first page of the scale booklet which is self explanatory. The answers of the subject were recorded on the scale protocol. Scoring was done according to the instructions given in the manual In order to analyse the data, mean and S D. were measured by the raw score obtained on the basis of social and educational adjustment inventory. T-test was applied to know the significance of the differences between boys and girls students.

15. Method of data collection:-

In the present study Dr. M. N. Palsane's Adjustment Inventory has been used.

16. Method of statistical Analysis:-

Mean, S. D. 't' test.

17. Conclusion and Discussions:-

In the present study the result table is following:-

Table No 1

Boys	Social Adjustment	Educational Adjustment
Mean	33.22	35.83
S.D	21.68	14.05
't' Test Value	0.47	9.92

Significant level at 0.5

Social and educational adjustment among adolescence boys.

Table No 2

Girls	Social Adjustment	Educational Adjustment
Mean	39.30	37.60
S.D	14.58	89.80
't' Test Value	1.7	0.01

Significant level at 0.5

Social and educational adjustment among adolescence girls.

On the basis of above findings it can be concluded that -

1. There is significance difference in social adjustment among adolescence boys and girls.

2. There is significance difference in educational adjustment among adolescence boys and girls.

As per above conclusions, we can say that, school and colleges are the secondary socializing agencies. So teacher should promote help and encourage the adolescence for better social and educational adjustment by conducting various types of training programmes

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EDUCATIONAL ADJUSTMENT AMONG PRE-UNIVERSITY STUDENTS

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Abstract

Educational adjustment is most important in the student's academic life. The purpose of this research is to assess the educational adjustment among Pre-University students. The   sample size of this research involves 240 Pre-University students, comprising 120 boys (60 Urban and 60 Rural) and 120 girls (60 Urban and 60 Rural) from various Pre-University Colleges in Bangalore. The standardized tool Adjustment Inventory developed by Dr. Penny Jain was employed for data collection. The obtained data were scored and was analysed using SPSS. The results revealed that there is a significant mean difference between boys and girls of Pre-University Students on the level of educational adjustment. Girls have obtained a greater mean score (M=7.08, SD=1.82) on a total score of educational adjustment compared to boys (M=6.98, SD=2.06). It indicates that girls have shown a better level of educational adjustment compared to boys. This study contributes to the understanding of Educational adjustment among Pre-University students, providing insights into the importance of educational adjustment for effective academic achievement in student's life.

Keywords: Educational adjustment, Pre-University students, Urban and Rural Students, Adjustment inventory

Introduction:

Psychological adjustment refers to a young person's ability to adapt adequately to his or her environment, considering emotional, behavioral, and social aspects (Goodman, 2001). An inappropriate adjustment to the immediate social context increases behaviour problems, such as substance abuse, aggression, violence, and delinquency. Furthermore, psychological maladjustment increases the probability of presenting emotional problems (e.g., feelings of distress, fears, and worries) and somatic complaints (e.g., headache and stomach pain). In addition to the risk of problems arising from lack of adjustment, there is often a decline in subjective well-being during adolescence.

According to psychology an adjustment refers to the behavioral process by which an individual maintain equilibrium in society. "An adjustment is the process of finding and adopting modes of behavior suitable to the environment of the change in the environment" (Scalera and Alivernini, 2010). The shift between high school and college can be challenging and many changes occur in emotional, social and academic adjustment .A number of adjustment problems which has a direct impact introducing the individual's efficiency. By having these problems they are not able to achieve the desired goals with their abilities. There are many factors responsible for their performance but intelligence plays a major role in better performance with the help of adjustment. Intelligence is responsible to determine one's adjustment in life. (Scalera and Alivernini, 2010).

Educational Adjustment

In the educational system, academic achievement stands as a cornerstone, transcending other scholastic pursuits. Over time, it has evolved as a reliable gauge of students' proficiency in their studies and coursework. This comprehensive understanding positions academic performance as the culmination of a student's diverse endeavors within an educational institution. Additionally, academic achievement is construed as the extent to which a student has achieved their educational objectives (Chen, Chen & Zhu, 2012 & Steinmayr et al., 2014).

Academic performance refers to the complex process of adjusting to the demands and expectations of the academic environment in which students attempt to match their own needs with the requirements of their education (Seker & Lawrence, 2016). This multifaceted concept covers a range of various dimensions of student life, such as academic, intellectual, emotional, and social well-being. Finding a balance between these aspects and being content in each is essential for a good academic transition. A student's overall adjustment is greatly influenced by several factors, including prosocial behavior, school happiness, academic achievement, and participation in extracurricular activities. On the other hand, inadequate academic adjustment might show up as poor academic achievement, behavioral issues, a lack of interest in learning objectives, and in the worst situations, dropping out of school. Moreover, factors including over protection, a lack of affection in the family, and a lack of enthusiasm for learning might shape adolescent adjustment patterns in a variety of life domains (Eton, 2014 & Vyas, 2021).

Review of Literature:

Purabi & Lutfun (2023) In the present study an attempt has been made to study the adjustment problems of college students especially in the three dimensions- Social, Emotional and Educational Adjustment. A total number of 178 college students (112 boys and 66 girls), studying in two degree colleges of Barpeta District were selected randomly. The tool for data collection was Adjustment Inventory for College Students by Prof. A. K. P. Sinha and Prof. R. P. Singh (2005). The statistical techniques, Simple Percentage, Mean, Standard Deviation and t test were used to test the significance of the difference between the variables. The result of the study revealed that the level of adjustment of college students is Average. There exists significant difference between boys and girls college students in emotional adjustment and there exists no significant difference between boys and girls college students in Social and Educational adjustment. Again, there exists significant difference between Arts and Science college students in Social and Emotional Adjustment and there exists no significant difference between Arts and Science college students in Educational Adjustment.

According to the Priya & Indu (2023) The purpose of this research was to learn more about the secondary school students' educational adjustment in Sonipat. The study attempted to examine Educational Adjustment in terms of sex and types of school. The sample constituted total 100 secondary school students out of which 50 were boys and 50 girls studying in private and government schools of Sonipat. Educational Adjustment Inventory by Rani & Singh (2014) was used for Academic achievement scores have been taken from the ninth-class final exam scores of students. Mean, SD and 't' tests were being calculated. The result showed that according to norms of the Educational Adjustment Inventory manual secondary school students had above average level of adjustment. It was also observed that the girl secondary school students are having more educational adjustment boy secondary school students in Sonipat and the educational adjustment of secondary school students in

Sonipat, both private and public, is not significantly different. It was also noted that girl students and students studying in private schools were found to have more academic achievement than their counterparts male and government secondary school students. A significant and positive relationship was also observed between educational adjustment and academic achievement among secondary school students.

The study by Al-Mseidin, Omar-Fauzee, & Kaur (2017) examined the relationship between Social Adjustment and Academic Adjustment among secondary female students in Jordan. A total of 100 students from one school were examined. The result from the analysis posited that there is a high level of Social Adjustment (60%) and Medium level of Academic Adjustment (66%). Additionally, there is a positive statistically significant correlation (0.552) among the total of Social Adjustment and the total of the Academic Adjustment. Pearson correlation was used to evaluate the overall relationship between social and academic adjustments. A strong positive correlation was found between the social and academic scores of students. The current study has also discussed the results, the limitations and the recommendations.

Kamath (2015) studied the role played by mindfulness-based program in building resilience, emotional intelligence and educational adjustment of adolescents. Students voluntarily participating in an eight session course of mindfulness-based program were compared on resilience, emotional intelligence and educational adjustment during the pre and post-intervention condition. The EI was also compared to a comparable group of students from the same institution, who did not participate in the course. Mindfulness based program was found to be effective in improving the emotional intelligence and academic adjustment of the adolescents. However there was no effect seen on the participant's level of resilience.

Salami (2011) examined the contribution of psychological and social factors to the prediction of adjustment to college. A total of 250 first year students from colleges of education in Kwara State, Nigeria, completed measures of self-esteem, emotional intelligence, stress, social support and adjustment. Regression analyses revealed that all the independent variables predicted adjustments. Social support interacted with stress to predict adjustment. Implications for the counselors, parents and college authorities in enhancing students' adjustment to college were discussed. Further, the findings implicated the need for college authorities to integrate activities designed to improve students' adjustment into college co-curricular activities meant for youth development.

Significance of the Study:

Educational adjustment is the ability of the individual to find balance with academic activities and adjust to academic settings. It helps young people to grow and develop along certain lines, to acquire knowledge and skill and to learn certain ways of thought and feelings so that they may be able to adjust in social life. Educational adjustment is crucial for academic success. The problem of educational adjustment leads to psychological issues and in turn affects the individual's personality. Hence, Educational adjustment has become an important topic in Psychological research area. By studying educational adjustment among students measures can be taken to develop interventions, counselling modules and guidance programs for the welfare of the students' academic success and also to create a good encouraging educational setting.

Objective of the Study:
➢ To study the gender difference in the level of educational adjustment among pre university students.
➢ To study the level of educational adjustment among urban and rural pre university students.

Hypotheses:
➢ There is a significant gender difference in the level of Educational Adjustment among Pre-University Students.
➢ There is a significant difference in the level of Educational Adjustment among Urban and Rural Pre-University Students.

Tool for the Study:

Demographic Data Collection Tool: Demographic data consisting of primary information (Name, Age, Class, Gender, Urban/Rural).

Adjustment Inventory: Adjustment Inventory developed by Dr. Penny Jain (1989) consists of 50 items which measures adjustment of the college students in the following areas Family, Social, Educational, financial and Emotional. Each area has ten questions. Each item has two options for answering i. e., Yes or No. Reliability of the test score is 0.94 and Validity of the test score is 0.93.

Operational Definitions:

Educational Adjustment: Educational Adjustment refers to the way the students carry out their responsibilities towards for one's successful education. While students who perform well on exams tend to feel more at ease in their educational setting, The good adjustment in educational environment helps the students to score better in their academics.

Pre-University Students: The students studying in 11th and 12th grade education are considered as Pre-University Students.

Variables:

Independent Variables: Gender (Boys and Girls) and domicile variables (Rural and Urban) Pre-University Students**.**

Dependent Variables: Educational Adjustment.

Research Design:
Descriptive method of research.

Sample Design:
The present study consists of 240 Pre University students 120 boys (60 Urban and 60 Rural) and 120 girls (60 Urban and 60 Rural) from different Pre-University Colleges in Bangalore (Urban and Rural) in Karnataka.

Inclusion Criteria:
• Both first and second year Pre-University students (Boys and Girls) Rural and Urban students, age group (16-18 years) were considered.
• Participants who are willing to participate voluntarily were included.
• Students who can read and write Kannada and English languages were included.

Analysis of Results and Discussion:

Table 1: Shows the N, Mean, Standard Deviation and t ratio on Gender difference on Educational Adjustment among Pre-University College Students.

	Group	A total Scores on Educational Adjustment				
		N	Mean	SD	T	P
A total Scores on Educational Adjustment	Boys	120	6.98	2.06	0.36	.71
	Girls	120	7.08	1.82		
	Total	240				

Table 1 shows the mean score and standard deviation, t ratio on the level of Educational Adjustment of Pre-University Students. Girls have obtained a greater mean score (*M=*7.08, *SD=*1.82) on a total score of educational adjustment compared to boys (*M=*6.98, *SD=*2.06). It is shown that the mean difference of boys and girls on the total mean score of Educational Adjustment and also the girls have shown a better level of Educational Adjustment compared to boys. In comparing the significant mean difference between boys and girls on the level of Educational Adjustment an independent sample t test is calculated and the obtained *t* (238) =0.36, *p* >.05. This indicates that there is no significant gender difference in the level of Educational Adjustment, which showed that girls have shown a better Educational Adjustment when compared to boys, where as this mean difference is not a significant mean difference, hence the results are not according to the hypothesis "There will be a significant Gender difference in the level of Educational Adjustment among Pre- University Students.

Table 2: Shows the N, Mean, Standard Deviation and t ratio on difference on Educational Adjustment among Urban and Rural Pre- University College Students.

	Group	A total Scores on Educational Adjustment				
		N	Mean	SD	T	P
A total Scores on Educational Adjustment	Urban	120	6.95	1.96	0.63	.52
	Rural	120	7.11	1.92		
	Total	240				

Table 2 shows the mean score and standard deviation, t ratio on the level of Educational Adjustment among Urban and Rural Pre-University College Students. Rural students have obtained a greater mean score (*M=*7.11, *SD=*1.92) on a total score of Educational Adjustment compared to Urban students (*M=*6.95, *SD=*1.96). It is shown that the mean difference of Urban students and Rural students on the total mean score of Educational Adjustment and the Rural students have shown a better level of Educational Adjustment compared to Urban students. In comparing the significant mean difference between Urban students and Rural students on the level of Educational Adjustment an independent sample t test is calculated and the obtained *t* (238) =0.63, *p* >.05. This indicates that there is no significant difference in the level of Educational Adjustment among Urban and Rural Pre- University College Students, which showed that rural students have shown a better Educational Adjustment but this obtained difference is not a significant difference, when compared to urban students hence the

results are not according to the hypothesis "There will be a significant difference in the level of Educational Adjustment among Urban and Rural Pre- University College Students.

Hypotheses based discussion:

> **H1: There is a Significant Gender difference in the level of Educational Adjustment among Pre-University Students.**

The obtained mean difference indicated that girls have shown a better level of Educational Adjustment compared to boys. In comparing the significant mean difference between boys and girls on the level of Educational Adjustment an independent sample t test is calculated and the obtained *t* **(238) =0.36, *p* >.05.** This indicates that there is no significant Gender difference in the level of Educational Adjustment, which showed that girls have shown a better Educational Adjustment when compared to boys, whereas this mean difference is not a significant mean difference, hence the results are not according to the hypothesis "There will be a significant Gender difference in the level of Educational Adjustment among Pre-University Students.

> **H2: There is a Significant difference in the level of Educational Adjustment among Urban and Rural Pre-University Students.**

The obtained mean difference indicated that rural students have shown a better level of Educational Adjustment compared to urban students. In comparing the significant mean difference between Urban Students and Rural Students on the level of Educational Adjustment an independent sample t test is calculated and the obtained *t* **(238) =0.63, *p* >.05.** This indicates that there is no significant difference in the level of Educational Adjustment among Urban and Rural Pre-University College Students, which showed that rural students have shown a better educational adjustment but this obtained difference is not a significant difference, when compared to urban students hence the results are not according to the hypothesis "There will be a significant difference in the level of Educational Adjustment among Urban and Rural Pre-University college students. There are no sufficient evidences to show the Gender difference in the level of academic failures and home support at school among Pre-University Students.

Conclusions:

> It is found that there is no significant Gender difference in the level of Educational Adjustment among Pre-University Students.

> It is found that there is no significant difference in the level of Educational Adjustment among Urban and Rural Pre-University Students.

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ASSESSMENT OF SELF-IDENTITY AMONG B.ED. STUDENTS

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Abstract

Self-identity is an individual's sense of who they are and it is the combination of their personality, physical attributes and interests. Self-identity for B.Ed students plays an important role as it influences how they teach, interact with students and create a learning environment. The aim of the present study was to assess the self-identity among B. Ed students. A descriptive survey design was employed, the sample size of this study consists of 160 B. Ed students, comprising 80 urban B. Ed students (40 Male & 40 Female) and 80 rural B.Ed students(40 Male & 40 Female) in Dharwad, Karnataka State by using a standardized Self understanding questionnaire for assessment. The SPSS version was used for data analysis. The results indicated that there is no significance difference between level of self-identity among male and female, urban and rural B. Ed Students. Male and female B. Ed students do not differ much on Self Identity. Rural B. Ed students have slightly better Self Identity than Urban B. Ed students. This study contributes to the understanding of self-identity in teacher educators and also develop intervention programmes.

Keywords: Self-identity, B.Ed Students, Rural and Urban Students, Male and Female B.Ed Students, Self-understanding questionnaire.

Introduction

Self-identity can be defined as an individuals one's sense of knowing or identifying oneself as who I am and what I am, it is shaped by the social interactions and personal participation. It includes the understanding of oneself in relation to the society.

Self-identity, a complex tapestry woven from personal experiences, social interactions, and cultural influences, is the psychological construct that defines who we are. It is the subjective sense of self, a narrative we construct about our place in the world. This dynamic and multifaceted concept encompasses our beliefs, values, aspirations, and how we perceive ourselves in relation to others (Erikson, 1968).

Self-identity is composed of relatively permanent self-assessments such as personality, ability, attitude, interest, and awareness of one's physical attributes (Baumeister, 1999). Self-identity refers to an individual's perception of themselves, encompassing their beliefs, values, interests, and roles that define who they are. It involves understanding one's unique characteristics and how they relate to others and the world around them (Oyserman, Elmore, & Smith, 2012).

Review of Literature:

At its core, self-identity is a quest for meaning and belonging. It involves understanding our strengths, weaknesses, passions, and how these elements intersect with our social roles and group affiliations (Marcia, 1980). Our identity is shaped by a myriad of factors, including gender, ethnicity,

nationality, religion, socioeconomic status, and personal achievements. These elements intertwine to create a unique sense of self that guides our thoughts, emotions, and behaviors (Tajfel & Turner, 1986).

The development of self-identity is a lifelong process. In adolescence, individuals often grapple with identity crises as they explore different roles and values (Erikson, 1968). This period is marked by experimentation and a search for autonomy. As we mature, our identity continues to evolve in response to life experiences, career choices, relationships, and personal growth (Arnett, 2000). Individuals with a well-developed identity are better equipped to make informed decisions, build meaningful relationships, and cope with life's challenges (Kroger, 2007).

According Ali, Hassan, & Yusof (2019), in the study "The Development of Teacher Identity During a B.Ed. Programme" focuses on teacher identity development in a Malaysian B.Ed. program offers a valuable window into the transformation student teachers undergo during their training. This review delves into the study's strengths, key findings, and implications for teacher education, while acknowledging its limitations and areas for further exploration. By highlighting the program's role in shaping this identity and the significance of curriculum design, quality practicum experiences, and effective mentorship, the research provides valuable insights for teacher educators to cultivate a generation of teachers with a strong sense of purpose, pedagogical expertise, and a commitment to fostering positive learning environments for their students.

The study by Singh & Singh (2017), "Becoming a Teacher: Exploring the Self-Identity Development of B.Ed. Students in India" focuses on exploring the evolving self-identity of B.Ed. students in India. The researchers adopted a qualitative approach, conducting interviews with students from diverse backgrounds enrolled in a B.Ed. program. The study sheds light on the complex process of self-identity development among B.Ed. students in India. By recognizing the influence of personal experiences, societal expectations, and program curriculum, teacher educators can create programs that support students in constructing a strong, positive, and reflective teacher identity.

The Research study by Gupta. R. & Chen. H. (2015), "Assessment of Self-Perception in B.Ed Students: A Comparative Study" investigates different approaches to assessing self-perception among Bachelor of Education (B.Ed) students. Through a rigorous analysis of assessment methods, such as self-report measures and peer evaluations, the study compares their reliability, validity, and practical utility in capturing B.Ed students' perceptions of themselves as future educators. By highlighting the strengths and limitations of each approach, this study offers valuable insights for educators and researchers seeking to enhance self-perception assessment in teacher education contexts.

According to Choi. H & Patel. R (2011), "Assessment of Self-Regulation Skills in B.Ed Students: A Critical Review" evaluates the assessment of self-regulation skills in Bachelor of Education (B.Ed) students. By synthesizing research on self-regulation assessment methods, the review examines the reliability, validity, and practical utility of various measurement tools. Through a critical lens, the review identifies gaps in existing assessment practices and proposes recommendations for enhancing the assessment of self-regulation skills in teacher education programs.

Significance of the Study:

The assessment of self-identity among Bachelor of Education (B.Ed.) students is to determine the understanding of how these future educators have an understanding about one's own identity and how they perceive themselves. This self-identity is most important in developing one's own personality in turn affecting one's professional as well as personal life. Hence it is of utmost importance to assess

the self- identity of the B. Ed Students in psychological research view point. The present study, aims to assess the self-identity among B. Ed students.

Objective of the Study

To assess the level of Self-identity among B.Ed Students.

Hypothesis of the Study

Ho 1: There is no significant difference between level of Self-identity among male and Female B.Ed Students

Ho 2 : There is no significant difference between level of Self-identity among Urban and Rural B.Ed Students.

Tool for the Study

Demographic Data Collection Tool : Demographic questionnaire which consist of primary information of B.Ed Students (Name, Studying education, Gender, Urban/Rural)

Self- understanding questionnaire : Self- understanding questionnaire developed by Dr.Akhtar Bano & Dr. Sushma Talesara. It consists of 60 items (42 Positive and 18 Negative). Reliability of the test score is 0.01 and Validity of the test score is 0.01

Operational Definition

Self-identity

The answer of "who am I" is self -identity. Self identity is composed of relatively permanent self assessments such as personality, ability, attitude, interest and awareness of one's physical attitudes. The way you look at yourself and your relationships to the world or who you want to be will help building self-identity. The self identity is not restricted to present. It includes past and future selves, future selves means ideas of what they might become, what they would like to become, what are fears, hopes, dreams, goals. Self identity can be thought of as your property. Boundaries of your self identity is your preferences, poor self identity is seen when one evaluate low to self worth. This occurs when one believe that he has little worth or value. This often occur when key people in one's life are critical towards his or when one is perfectionist and critical towards himself.

B.Ed. Students:-

B.Ed. (Bachelor of Education) students in this study specifically denote individuals currently enrolled in undergraduate teacher education programs.

Research Design

The study was conducted through descriptive method of research.

Sample:

The present study sample consists of 160 B. Ed. Students consisting of 80 Urban B.Ed Students (40 Male & 40 Female) and 80 Rural B.Ed Students (40 Male & 40 Female) from Dharwad, Karnataka.

Statistical Analysis

The SPSS version was used for data analysis.

Analysis of Results and Discussions

1. **To assess the level of self-identity among B. Ed. Students**

   Table-1 Shows the difference between male and female of B.Ed. students in relation to Self-identity.

Gender	N	M	SD	Standard Error Mean
Male	80	13.86	2.96	.331
Female	80	13.77	2.52	.282

The Table shows scores of Self Identity dimension among male B.Ed students have a mean score of $M = 13.86$, $SD = 2.96$ and female B.Ed students have a mean score of $M = 13.77$, $SD = 2.52$ showing that males and female B.Ed students do not differ much on Self Identity.

Table-2 : Showing the Mann-Whitney test results for Self-identity for B.Ed students

Self-identity	Mann-Whitney U	Wilcoxon W	Z	Asymp.sig(2-tailed)
	3127.000	6367.000	-.251	.802

Table shows that in the Self- Identity, there is no significant difference in the mean ranks of male and female B.Ed students $U = 3127.50$, $p = 0.80$. $H_0 3$: There is no significant difference between Self- Identity among male and female B.Ed. students is retained.

Table-3 Shows the difference between Urban and Rural B.Ed. students in relation to Self-identity.

Domicile	N	M	SD	Standard Erro Mean
Urban	80	13.63	3.00	.336
Rural	80	14.00	2.46	.275

Table showing in Self identity dimension Urban B.Ed students have a mean score of $M = 13.63$, $SD = 3.00$ and Rural B.Ed students have a mean score of $M = 14.00$, $SD = 2.46$ showing that Rural B.Ed students have slightly better Self Identity than Urban B.Ed students. .

Table-4 Table showing the Mann-Whitney test results for Self-identity for B.Ed students

Self-identity	Mann-Whitney U	Wilcoxon W	Z	Asymp.sig(2-tailed)
	3044.00	6284.00	-.536	.592

Table shows that in Self- Identity, there is no significant difference in the mean ranks of Urban and Rural B.Ed students , $U = 3044.00$, $p = 0.59$. Hence $H_0 2$: There is no significant difference between Self-Identity among urban and rural B.Ed. students is retained.

It was observed that male and female B.Ed students did not differ significantly in self-identity. Adolescence is a critical period for identity development, and research shows gender differences in how boys and girls navigate this stage. Erikson's theory of psychosocial development suggests that during adolescence, individuals go through an identity vs. role confusion stage, where they experiment with different roles and values to form a stable self-identity. Girls tend to focus more on relational aspects

of identity (e.g., friendships, romantic relationships), while boys may focus more on personal achievements and independence. Rosenberg and Simmons (1975) found that adolescent girls tend to place more emphasis on social approval and peer acceptance, which can shape their self-identity, while boys are more focused on internal values like self-reliance.

Implications of the study

Targeted Interventions: Programs designed to enhance self-related constructs should account for both gender and geographic differences. Customizing interventions to address specific needs can lead to more effective outcomes.

Policy and Practice: Educational and developmental policies should incorporate these findings to ensure equitable support for students, considering both urban and rural contexts as well as gender-specific needs.

Further Research: Continued research is essential to understand evolving trends and ensure that interventions remain relevant and effective for different populations.

Conclusions

1. Male and female B.Ed students do not differ significantly in their self-identity dimension.

2. Rural and urban B.Ed students do differ significantly in their self-identity.

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IMPACT OF SOCIAL AND EMOTIONAL LEARNING ON STUDENTS' WELL BEING

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Abstract

The cutting-edge teaching method known as social and emotional learning (SEL) develops students' social competencies, emotional intelligence, and self-regulation abilities while fostering overall development. The essential benefits of SEL on students' welfare—including their emotional, psychological, social, and academic well-being—are examined in this study. Social-emotional learning (SEL) directly enhances mental health, lowers stress levels, and increases resilience by teaching children how to control their emotions, form healthy relationships, and make wise decisions. Additionally, SEL enhances students' social skills, leading to stronger peer relationships and larger support systems—both essential for preserving emotional stability.

Studies show that students who participate in SEL programs have better academic results, lower anxiety, and higher self-esteem. SEL also fosters a supportive and nurturing school climate that enhances children's overall wellbeing. This abstract highlights the long-term advantages of incorporating SEL into the educational curriculum for improving student wellbeing and academic success, underscoring the crucial role that SEL plays in equipping students to confront life's difficulties with confidence and emotional stability.

Key Words: *Effects, Social, Emotional, Learning, Student Well-being, Emotional Regulation*

Introduction:

In the evolving landscape of education, the recognition that academic success is intertwined with emotional and social development has led to a renewed focus on Social and Emotional Learning (SEL). SEL comprises a set of skills and competencies that enable individuals to navigate their emotions, establish positive relationships, make responsible decisions, and effectively manage their interactions with others. As educational stakeholders prioritize holistic development, understanding the impact of SEL on student well-being becomes essential.

Well-being in students encompasses their emotional, social, and academic health, each of which is significantly influenced by the presence or absence of effective SEL practices. This conceptual framework seeks to illustrate the connections between SEL competencies, student well-being indicators, and educational outcomes, while also considering key contextual factors that mediate these relationships. The framework posits that when students engage in SEL, they are better equipped with the emotional regulation skills, social awareness, and relationship-building techniques necessary to thrive in academic settings and beyond. Enhanced self-awareness enables students to recognize and understand their emotions and behaviours, fostering resilience and adaptability. Social awareness and relationship skills promote supportive peer interactions and mitigate conflicts, contributing to a positive school climate.

Moreover, this framework identifies crucial mediating factors, such as the school environment, parental involvement, and cultural contexts, which can either facilitate or hinder the effectiveness of SEL programs. A supportive school climate and active parental engagement create an ecosystem where SEL principles can flourish, leading to improved indicators of student well-being, including emotional

health, social connectedness, and academic engagement. Ultimately, the conceptual framework underscores that SEL is not merely an educational obligation but a vital component for cultivating a generation of emotionally intelligent, socially competent, and academically successful individuals. By understanding the intricacies of this relationship, educators and policymakers can implement more effective SEL strategies, fostering an environment where all the students can achieve their fullest potential.

Studies Endorsing SEL

Research indicates that participation in SEL programs can result in improvements in academic achievement of 11%, a reduction in emotional distress, and a decrease in aggressive behaviour. By giving children the necessary tools to overcome obstacles in life, SEL has an impact on both short- and long-term academic performance.

Students' holistic well-being is greatly enhanced by SEL, which develops emotional intelligence and makes them more adaptive and resilient people.

The best SEL strategies and programs take into account the social and emotional needs of both teachers and children, according to a study of the research. Employees are less likely to experience stress at work if they feel safe and appreciated. When it comes to engaging, leading, and guiding kids, school personnel who personally support social and emotional competencies are more likely to incorporate and model these competencies. Intentional, school-based communities of practice and training programs are advantageous and productive for school staff.

Policies, rules, and resources for SEL professional development at the state and district levels are among the levers that could have a significant impact on schools. Schools are more effective as learning environments for children when instructors and administrators receive training in social and emotional learning. This improves focus, problem-solving skills, and academic performance.

Theoritical Framework

In order to address students' social and emotional abilities, the Collaborative for Academic, Social, and Emotional Learning has defined five interrelated sets of cognitive, affective, and behavioural competences, or learning standards. The following are these five competencies:

1. The capacity to precisely identify one's own feelings, ideas, and values as well as how they affect behaviour is known as self-awareness. The ability to be self-aware is linked to good teaching strategies.

2. The capacity to successfully control one's feelings, ideas, and actions in various contexts is known as self-management. Similar to emotional and impulsive control.

3. The ability to respect others in all social contexts, understand and empathise with people from different origins and cultures, and identify the resources available to oneself through family, school, and the community is known as social awareness.

4. The ability to build and maintain fulfilling relationships with a variety of people and groups is a component of relationship skills. The capacity for effective communication, active listening, teamwork, resistance to improper social pressure, dispute resolution through negotiation, and the willingness to ask for and provide assistance when needed.

5. Making wise decisions regarding one's own conduct, that of others, and ethical and safety issues is known as responsible decision-making.

This competency entails taking into account one's own and others' well-being, weighing the advantages and disadvantages of different options, accepting responsibility for one's actions, and using problem-solving techniques to articulate positive alternatives. Healthy conduct and making thoughtful decisions are essential for developing a solid rapport between teachers and students.

Important Factors about the Well-Being of Students

The well-being of students is significantly impacted by social and emotional learning (SEL), on both a personal and academic level. The process of gaining the ability to control one's emotions, create and meet constructive goals, empathize with others, build healthy relationships, and make moral decisions is known as self-empathy learning (SEL). Several important results substantiate its influence on students' well-being:

1. **Improved Mental Health**
   - **Emotional Regulation:**
     Stress, worry and irritation are among the emotions that SEL teaches kids how to control. Reduced rates of anxiety, depression, and behavioural problems are a result of this.
   - **Resilience**: Pupils that possess SEL skills are more able to overcome obstacles and overcome failures, which strengthen their mental and emotional resilience.

2. **Enhanced Academic Performance**
   - **Focus and Self-Discipline**: Students who learn to control their emotions and maintain focus frequently have greater academic results, such as higher test scores and grades.
   - **Motivation and Engagement**: By assisting students in creating meaningful goals and maintaining interest in their studies, SEL promotes intrinsic motivation in learners.

3. **Better Relationships and Social Skills**
   - **Empathy and Compassion**: By fostering empathy, SEL enables children to create bonds that are more positive with their family, friends, and teachers. As a result, there are fewer confrontations and students feel more included in the school setting.
   - **Communication**: Students get improved conflict resolution and communication skills, which are critical for cooperation and teamwork.

4. **Increased Self-Esteem and Confidence**
   - **Self-Awareness**: Students that get SEL instruction are better able to identify their areas of strength and growth in self-awareness. Their confidence and sense of self are increased by this self-awareness.
   - **Goal Setting and Achievement**: Students feel more accomplished and value themselves more when they know how to develop and achieve realistic goals.

5. **Reduction in Problem behaviours**
   - **Positive Behaviour**: Pupils that participate in SEL education programs typically display less aggressive, bullying, or substance-abusing conduct.
   - **Social Responsibility**: SEL encourages moral decision-making and a sense of accountability, which improves the school environment and lowers the number of disciplinary events.

6. **Long-Term Well-Being**
   - **Lifelong Skills**: Students that participate in SEL receive life skills that they can use throughout adulthood. These abilities support preserving mental health, establishing happy relationships, and overcoming obstacles in both the personal and professional spheres.

- **Civic Engagement**: Additionally, SEL develops a feeling of citizenship and community, which encourages students to get involved in community service projects and constructive societal change.

Conclusion:

The all-encompassing strategy known as social and emotional learning (SEL) promotes students' intellectual, emotional, and social development. It encourages a well-rounded educational strategy that takes into account growth beyond the mind. By giving kids the skills they need to handle stress, anxiety, and other emotional difficulties, SEL promotes better mental and emotional health. It fosters resilience and lowers the prevalence of mental health issues. Students' academic performance is positively impacted by SEL because it fosters motivation, self-control, and focus. SEL qualities like goal-setting, tenacity, and emotional control help students succeed academically and participate more in the classroom. Through the development of empathy, communication, and conflict resolution skills, SEL improves students' capacity to establish and preserve wholesome connections with instructors and peers. Through SEL programs, students acquire life skills that enable them to overcome obstacles in their personal and professional lives, forge solid bonds with others, and make meaningful contributions to their communities.

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ROLE OF SOCIAL AND EMOTIONAL LEARNING AMONG HIGHER PRIMARY SCHOOL STUDENTS

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Abstract

The present study aimed to investigate the effect of social and emotional learning among higher primary school students. The study consists of 156 students from Kalaburagi andYadgir districts of Karnataka state, divided equally into groups based on the school type and gender. The Social and Emotional Learning Scale (Coelho, Sousa, & Marchante, 2015) was usedto measure SEL. Statistical analysis involved mean, standard deviation, and t-tests. Findings indicate significant differences in SEL between rural and urban students. Additionally, sociodemographic factors like school type, gender, and medium of instruction influence SEL among higher primary school students in these districts. The paper discusses implications andrecommendations based on these results.

Keywords: *SEL, higher primary school, students.*

It is the process by which young people and adults acquire a wide range of social, emotional, and behavioral skills. It may involve teaching social problem-solving techniques or fostering emotional self-awareness (Durlak, Domitrovich, Weissberg, & Gullotti, 2015).

Since early social and emotional competency is linked to adult outcomes such as success in the workforce (Heckman & Kautz, 2012), lower rates of drug use and criminal violence (Durlak, Weissberg, & Pachan, 2010), and defense against the emergence of mentalhealth issues later in life (Greenberg, Domitrovich, & Bumbarger, 2001), it is considered the cornerstone of healthy development. Schools are viewed as the primary hub for teaching andlearning strength-based strategies for preserving "good health" in the face of adversity (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004).

The process by which kids learn to comprehend and control their emotions, create and meet constructive objectives, feel and act empathetically towards others, build and sustain healthy relationships, and make responsible decisions is known as social and emotional learning. Other terms that schools use that are similar to SEL but have different emphasis include character education, building children's resilience, bullying prevention, life skills, behavior management, personal development, and supporting children's mental health and wellbeing. Development of Spirituality, Morality, Society, and Culture.

Core Skills at the heart of SEL

Self-awareness: the capacity to recognize one's own feelings, ideas, and beliefs and how they affect behavior with accuracy. the capacity to realistically evaluate one's advantages and disadvantages while maintaining a steady sense of optimism and confidence. The ability to identify emotions, accurately see oneself, identify strengths, have self- confidence, and self-efficacy are associated elements.

Self-management: the ability to effectively regulate one's thoughts, feelings, and behavior in a variety of situations; this includes impulse control, stress management, and self-motivation. the ability to set and achieve personal and academic goals. Related variables include impulse control, stress management, self-motivation, self-discipline, goal-setting, and organizational skills.

Social awareness: the capacity to understand other people's perspectives and feel their emotions. the capacity to identify resources and supports from family, school, and the community as well as to comprehend social and ethical norms for behavior. Related elements: Comprehending feelings, Sympathy/Empathy, Respecting differences, and Mutual Understanding

Relationship skills: the capacity to build and preserve positive relationships with a variety of people and groups. the capacity to listen intently, work with others, fight against unwarranted social pressure, resolve conflicts amicably, and ask for and provide assistance when necessary. The following are related factors: cooperation, social interaction, communication, and connection building.

Responsible decision making: the capacity to make wise decisions regarding one's conduct and social relationships. the realistic assessment of the effects of different decisions and the taking into account of one's own and others' well-being. The following are related factors: problem identification, solution analysis, problem solving, evaluation, reflection, and ethical duty.

There is a wealth of research linking social and emotional abilities in childhood to better results in education and later life, including in the areas of physical and mental health, academic achievement and school preparation, crime, work, and income.

For example, a UK longitudinal study found that by the time a child reaches the age often, they have developed good social and emotional skills, such as self-regulation, self-awareness, and social skills, which are predictive of a variety of adult outcomes (age 42), including overall health, success in the job market, and life satisfaction and wellbeing (Domitrovich 2017; and Goodman, 2015). Youngsters who possess good social and emotional learning competencies are able to control their emotions, form and maintain friendships, handle disagreement in a civil and productive way, and make morally and safely informed decisions (Norman & Jamieson, 2015). An individual's social and emotional learning competencies are also essential because they allow them to maintain self-control and make deliberate progress in their interpersonal development (Elcik & Bayındır, 2015).

According to Kocakülah & Ad (2015), social and emotional learning is the process of acquiring the skills necessary for crucial tasks like defining one's own and other people's feelings, showing sensitivity to requests, expressing and controlling feelings, understanding both positive and negative aspects of feelings, and establishing and maintaining effective communication. An strategy known as "social and emotional learning" looks to link kids' social lives, academic progress, and school adaption (Totan, 2014; McCormick, Cappella, O'connor, & McClowry, 2015). It is clear that SEL can enhance children's abilities in a variety of areas, including social and emotional development, academic performance-oriented skills, positive behavior adoption, techniques for lowering academic stress, bullying, anxiety, and social disengagement (Wigelsworth 2019).

Teachers may experience a less disruptive and more pleasant classroom climate as well as lower stress levels, higher work satisfaction, improved relationships with their students, and increased confidence in their teaching abilities as a result of SEL. These benefits may also extend to the school environment. According to a UK-based survey, instructors reported that their relationships with pupils had significantly changed as a result of teaching SEL (Greenberg,

M. and Jennings, T. 2009; Scott Loinaz, E. (2019). According to research by Jones et al. (2017),early socio-emotional learning aids in the development of children's social and intellectual abilities, which are essential for success in school and other aspects of life. When pupils are able to focus their attention, elementary classrooms can operate more efficiently. These talents also lead to higher general academic skills and deeper learning. Pupils who have improved their social skills are more likely to form enduring friendships and solid peer relationships in addition to being better communicators with adults and teachers. Childhoodsocial and emotional competencies have been connected to vital life skills 20–30 years later,including maintaining a job, having a stable financial base, and having good mental health (Jones et al., 2017).

The significance of studying the role of social and emotional learning (SEL) among higher primary school students is multifaced: Foundation for Future Success: SEL skills are crucial for students' overall well-being and academic achievement. By developing these skillsearly on, students are better equipped to navigate challenges, build positive relationships, andsucceed in both personal and academic endeavors. Improved Academic Performance: Research has consistently shown a strong correlation between SEL skills and academic outcomes. Students who can effectively manage their emotions, communicate effectively, andcollaborate with others are more likely to achieve higher grades and perform better in school.Positive School Climate: SEL skills contribute to a positive and supportive school climate. When students feel safe, connected, and understood, they are more likely to engage in learning andbe less prone to behavioral issues. Preparation for the Workforce: The modern workplace increasingly values social and emotional competencies. By developing these skills in primary school, students are better prepared for the demands of higher education and future careers.Addressing Mental Health Challenges: SEL skills can play a vital role in preventing and addressing mental health challenges among young people. By teaching students how to manage their emotions, build resilience, and seek support, we can help create a healthier andmore compassionate generation. In summary, studying the role of SEL among higher primaryschool students is essential for understanding how to promote students' overall well-being, academic success, and positive social development. Therefore, the present aimed at studyingthe role of SEL among higher primary schools in north Karnataka region.

Methodology

Research questions

1. How does social and emotional learning influence on teacher students' relationship

Objectives of the study

1. To study the level of social and emotional among students' boys and girls
2. To study the influence of SEL on type of schools among students.

Hypotheses

1. There would be a significant difference in SEL between boys and girls
2. There would be a significant influence of SEL on type of schools among students

Variables

Independent variables

- Boys and girls (students)
- Types of School

Dependent variables

- Social and emotional learning

- **Research design**

The present study is exploratory in nature and adopts survey methods. Sampling selection: Students studying in higher primary were included, the study samples were only restricted toKalaburagi and Yadgir districts of north Karnataka. The data has been collected from the higherprimary school students respectively using simple random method.

Research questionnaire

To assess the social and emotional learning competencies of the students, the studyemployed the Social and Emotional Learning Competencies Scale (SELCS) developed by Coelho et al. (2015). Originally in English, the scale was adapted into Turkish by the researcher. The original scale, comprising 41 items, demonstrated reliability and validity in Coelho et al.'s (2015) study, with a Cronbach's alpha of 0.87 for the overall scale. The scale'sfive sub-dimensions are social awareness, social isolation, self-control, social anxiety, and establishing relationships. Responses were scored on a 5-point Likert scale, ranging from"strongly disagree" (1) to "strongly agree" (5). Negative items were reverse scored.

Statistical Techniques:

t-test was carried out to find out the comparative analysis, i.e. boys and girls and typeof schools.

Results and discussion

Table 1. Shows the mean, SD and t-values of SEL among boys and girls of higher primary schools.

| SEL dimensions | Sample Group (n=150) | | | | t-value |
| | *Boys* *(n=75)* | | *Girls* *(n=75)* | | |
	Mean	*SD*	*Mean*	*SD*	
Factor 1	22.28	3.09	26.16	3.98	8.17***
Factor 2	21.36	4.23	23.12	5.68	5.18*
Factor 3	29.48	4.37	25.13	5.11	8.72***
Factor 4	20.53	5.13	17.40	4.66	3.38*
Factor 5	25.78	4.33	22.48	3.21	5.32**
SEL	131.01	18.29	125.94	13.38	13.95***

Factors: *Self-awareness, Self-management, social-awareness, Relationship skills, andresponsible decision making.*

Table 1. Shows the social and emotional learning scores of the higher primary schoolstudents. The results showed that the boys mean score is 131.01 and SD18.29, followed by the girls mean score is 125.94 and SD is 13.38. The t-value is 13.95, which is significant at
0.001 level. The findings suggest that boys outperformed girls in overall social and emotionallearning. However, girls demonstrated superior self-awareness and self-management skills.
Notably, boys exhibited stronger abilities in social awareness, relationship skills, and responsible decision-making. These results highlight the influence of family, school, andparental/teacher behavior on students' moral development and social-emotional competencies.

Table 2 shows mean and SD scores of SEL in relation to type of schools among students of higher primary schools

Variable	Type of schools (n=150)		
SEL	Public school (*n*=55)	Aided School (*n*=55)	Unaided school (*n*=40)
Mean	121.21	116.06	108.46
SD	19.21	18.51	18.59

An analysis of the table reveals that student from public schools (mean score: 121.21) demonstrated higher levels of social and emotional learning than those from aided schools (mean score: 116.06) and unaided schools (mean score: 108.46). This suggests that students in public and aided schools generally exhibit stronger social and emotional learning skills compared to those in unaided schools

Table 3 shows the One-way ANOVA for SEL scores in relation to type of schools among students of higher primary schools

Variable	Groups	Sum of Squares	def.	Mean Square	F
SEL	Between Groups	1647.518	2	823.45	
					6.209**
	Within Groups	110750.279	147	372.597	
	Total	112397.797	149		

*SEL-Social-emotional learning

The above table illustrate the one-way ANOVA for the **SEL** scores in relation to higher primary school students. The F-ratio is 6.209, which is significant at 0.01 level. It implies that there is a significant influence of type of schools i.e. public schools, aided schools, and unaided schools on social and emotional learning among students. Hence, the hypothesis-there is a significant influence of type of schools on SEL of higher primary school students has been accepted.

Discussion

Early childhood education is a critical period for nurturing social and emotional learning (SEL) skills. By incorporating SEL into the curriculum, we can significantly enhance children's overall development, including their academic performance. In elementary classrooms, students with strong SEL skills are better equipped to focus, manage their emotions, and communicate effectively with teachers and peers. These skills not only contribute to improved academic outcomes but also foster deeper learning. Moreover, children who have developed strong social skills are more likely to build positive peer relationships, lasting friendships, and effective communication with adults. This foundation of SEL skills is essential for children's success in school and beyond."

The study revealed that boys exhibited higher levels of social awareness than girls, suggesting that exploring their school environment more fully has positively impacted their development. This enhanced understanding of their surroundings enables boys to adapt better to school demands and build stronger relationships with teachers, parents, and other adults. Additionally, boys demonstrated superior skills in relationship building and responsible decision-making compared to girls.

In contrast, girls demonstrated stronger self-management and self-awareness skills. This suggests that girls are adept at regulating their emotions and behaviors. Moreover, their self-awareness allows them to understand and respond effectively to environmental demands. These skills contribute to girls' organized approach to appearance, behavior, and thinking, as well as their ability to adapt to new school environments.

The study indicates that school type significantly influences social-emotional learning

outcomes. Students from public schools demonstrated higher mean scores than those from unaided or private schools. This suggests that public and aided schools may provide more conducive environments for fostering social and emotional learning skills compared to unaided schools.

Conclusions

Based on the findings, significant differences in social and emotional learning (SEL) competencies were observed between boys and girls. Girls demonstrated superior skills in self-awareness and self-management, while boys excelled in social awareness, relationship skills, and responsible decision-making.

Additionally, the type of school significantly influenced SEL outcomes. Students from public schools generally outperformed those from aided and unaided schools, suggesting that public schools may provide more effective environments for fostering SEL skills.

Overall, these results highlight the importance of promoting SEL in educational settings to support students' holistic development. Future research should explore strategies for enhancing SEL skills, particularly for specific dimensions where disparities exist.

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DEVELOPING EMOTIONAL INTELLIGENCE THROUGH INCULCATING VALUES IN EDUCATION

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Abstract

"Education is not preparation for life; education is life itself. "The function of Education is to teach one to think intensively and to think critically. intelligence plus Character-that is the goal of education"(Martin Luther King Jr).

Emotional intelligence is the ability to recognize, comprehend, and control our own and others emotions. It entails social and technical abilities that aid in efficient communication, sympathetic interactions and successful interpersonal relationships.

In Today's educational settings, emotional intelligence is linked to academic success. Students with greater emotional intelligence manage learning hurdles more efficiently and are more satisfied with their schooling. They are adaptable, collaborative, and resilient.

Emotional intelligence (EI) and values are interconnected concepts that foster holistic development in individuals. According to Daniel Goleman's seminal book, "Emotional Intelligence" (1995), EI encompasses self-awareness, self-regulation, motivation, empathy, and social skills.

Educators can integrate EI and values into teaching practices through strategies such as mindfulness, role-modeling, and service-learning projects. As noted by Linda Lantieri and Daniel Goleman in "Teaching Emotional Intelligence" (2008), these approaches promote a supportive learning environment.

By incorporating EI and values into teaching practices, educators can cultivate emotionally intelligent, socially responsible, and morally conscious individuals.

Key words: Emotional intelligence, values, education.

Introduction:

Education is a multifaceted endeavor that goes beyond imparting academic knowledge; it is a comprehensive process aimed at nurturing individuals who are not only intellectually capable but also emotionally intelligent. Emotional Intelligence plays a pivotal role in education, contributing significantly to the holistic development of students. In an era marked by rapid social and technological changes, educators and institutions must recognize the importance of fostering Social and Emotional Learning to equip students with the necessary skills to thrive in the 21st century. Thus values also play a significant role to strengthen the personality of an individual.

The schools have more responsibilities in molding the character of student. In a fast development society of today's success has become an index of attaining position and respect. But education converts man into productive and competent human capital to undertake various developments of a nation and it requires that its students should receive appropriate education.

Concept of Emotional Intelligence:

Emotional intelligence (EI) is an important part of education because it affects students' academic success, personal growth, and general well-being. It encourages self-awareness, allowing children to deal with stress, overcome obstacles, and keep a happy attitude. EI improves

interpersonal relationships, resulting in a more favorable learning environment. Students with high EI can empathies with their peers, communicate successfully, and negotiate social complexity. They also show initiative in collaborative endeavors. Emotional intelligence prepares children for real-world circumstances by helping them acquire skills such as conflict resolution, flexibility, and resilience. Integrating EI into education leads not only to academic success but also to lifelong success and fulfilment.

Components of Emotional Intelligence

Goleman (1998) identifies the five elements as components of emotional intelligence:

Self-awareness, Self-Regulation, Motivation, Empathy, and Social Skills.

1. Self-Awareness

The key to success is knowing oneself. Self-awareness is knowing ones internal states, preference, resources, intuitions, etc. It indicates the ability to recognize, understand and accept one's own moods, emotions, drives, strengths and shortcomings as well as to see how these affects other people.

2.Self-Regulation

Self-regulation refers to managing and handing impulses, distressing feelings and upsets rather than denying or repressing these feeling, it implies making a choice as to how we express our feeling. Self-regulation helps in staying compose, focused, calm and helps think clearly even under pressure. Self-regulation has five steps: - selfcontrol, trust-worthiness, conscientiousness, adaptability and innovation.

3. Motivation

Motivation helps in the achievement of goals. It is an ability to pursue goals with energy and persistence. It provides the drive and zeal to shape our thoughts and actions. Three important motivational competencies are– Achievement drive, Commitment and Initiative.

4. Empathy

It refers to the ability to put oneself into others shoes and looks at the things or thinks from his point of view. It can be called the foundation skill for all social competencies. Emotionally balanced people are generally empathetic and not sympathetic.

5. Social Skills

 Social Skill is an ability to build rapport with various sections of society and create network of people.

Advantages of Emotional intelligence

- Emotional Intelligence (EI) is a very effective strategy for improving interpersonal relationships, communication, conflict resolution, stress management, and leadership.
- It enables people to comprehend and empathise with others, resulting in more harmonious relationships.
- EI also helps with good communication by helping people to express themselves clearly and empathically, reducing misconceptions.
- EI is also important in conflict resolution, allowing people to manage differences with tact and diplomacy.
- EI also provides individuals with coping tools to help them manage difficult conditions, such as the digital transformation of higher education.
- Executives with high EI frequently demonstrate excellent leadership skills, inspiring and motivating their colleagues and changing their style to diverse scenarios.

Signs of Personal Emotional Intelligence

Understanding emotional literacy is critical for personal development as well as interpersonal performance. Maintaining calm and focus in difficult conversations, adapting to changes in project goals without becoming frustrated, providing empathy to friends, articulating thoughts clearly, mediating disagreements, handling tight deadlines, cultivating positive relationships within a community, and seeking constructive feedback for improvement are all key indicators of high emotional intelligence. Self-awareness, resilience, empathy, effective communication, conflict resolution, adaptation, social awareness, and a dedication to personal growth and development are all demonstrated by these talents.

How to Improve Emotional Intelligence

Emotional intelligence (EI) can be developed by everyday routines such as daily blogging, emotion tracking, and receiving feedback from trusted others. Daily writing aids in the identification of triggers and patterns, which aids in the development of self-awareness. Emotion monitoring aids in categorising and charting feelings, and soliciting input from friends or co-workers can provide useful insights. Maintaining a positive attitude entails using affirmations, fighting negative thoughts, and cultivating thankfulness. These methods assist in shifting attitudes and encouraging a naturally cheerful internal dialogue.

Individuals can increase their EI and overall well-being by including affirmations, challenging negative ideas, and cultivating appreciation.

These additional steps will boost your emotional intelligence:

- Set clear, measurable, realistic, meaningful, and time-bound goals to improve emotional connection.
- Reflect on your goals frequently: Establish a system for regular evaluations to assess alignment with your objectives.
- Assess the underlying values driving your goals: To improve emotional connection, understand the basic motivations driving your ambitions.
- Manage negative emotions: Include deep breathing exercises to encourage relaxation and stress reduction.
- Make holistic well-being a priority: Make activities that contribute to your entire well-being a priority, such as exercise, sleep, and a nutritious diet.
- Develop empathy: Pay attention to the speaker, avoid distractions, and communicate comprehension through reflective responses.
- Use open-ended questions to encourage other points of view and avoid making assumptions.

To improve relationships and emotional resilience, incorporate practical tactics such as focused attention, reflective reactions, and open-minded inquiry into daily encounters. assist in properly managing academic workload and achieving the requisite Emotional Intelligence.

Emotional Intelligence positively correlates with academic success. Students with a high level of EI tend to be more motivated, focused, and resilient. They can manage stress effectively, which enhances their learning abilities. Furthermore, they exhibit better self-regulation, which is essential for time management and goal setting.

The Role of Schools in developing emotional intelligence.

Schools are not just about textbooks and exams; they are a microcosm of society where students learn to interact with diverse peers and educators. Developing strong interpersonal skills through EI is crucial for fostering positive relationships, collaboration, and effective communication. These skills are vital not only during school but throughout life. Emotional intelligence nurtures mental and emotional well-being. It helps students understand their emotions and address them in a healthy manner, reducing anxiety, depression, and other emotional issues. This self-awareness aids students in managing stress and developing resilience, which are essential life skills. Students with high EI are better equipped to handle conflicts and solve problems. They can empathise with others, which is a key component of conflict resolution. By understanding their own emotions, they can also approach challenges with a clear, rational mindset. The 21st-century workforce demands leaders with strong emotional intelligence. Leaders must inspire, motivate, and connect with their team members, and these qualities are deeply rooted in EI. Schools must nurture these qualities in students to prepare them for leadership roles in the future

Incorporating Social and Emotional Learning (SEL)into the curriculum ensures that it is treated with the same importance as academic subjects. Students are given lessons that teach emotional awareness, empathy, conflict resolution, and stress management. For example, including activities that promote peer discussions, group projects, and mindfulness exercises can foster emotional growth. Teachers play a pivotal role in modelling and imparting emotional intelligence. The educators are well-versed in understanding and teaching emotions, as well as creating a supportive classroom environment. The school environment is conducive to emotional growth. It is ensured that students feel safe expressing their emotions without fear of ridicule or judgement. Bullying prevention programs and anti-discrimination initiatives can be part of this effort. Parents are essential partners in fostering Social and Emotional Learning.(SEL) The school organises workshops and sessions to educate parents about the importance of emotional intelligence and provide them with tools to support their children's emotional development at home.

SEL fosters a more positive classroom atmosphere, promoting respect, cooperation, and active engagement in the learning process. This, in turn, makes teaching and learning more enjoyable and effective. As students develop emotional intelligence and resilience, they are better equipped to deal with the stresses of academic life. This can reduce the prevalence of mental health issues among students. SEL programs create a heightened awareness of the consequences of bullying and conflicts. By teaching empathy and conflict resolution, schools can significantly reduce such incidents. Students who develop strong emotional intelligence are better prepared for the challenges of life beyond the classroom. They are equipped with essential life skills that promote success and well-being. The positive impact of SEL extends well beyond school years. Students who have honed their emotional intelligence are more likely to become emotionally mature, empathetic, and successful adults.

The Role of Values in developing Emotional intelligence

Values give meaning and strength to an individual's character by occupying a central place in one's life. Values reflect one's personal attitude and judgments, decisions and choices behaviour and relationships, dreams and vision. These values influence our thoughts, feelings and actions and guide us to do the right things. Thus a value added personality tends to achieve the emotional intelligence.

Teachers are one of the main pillars of sound and progressive society. They bear the weight and responsibilities of teaching and apart from parents are the main source of knowledge and value for children. Value education is concerned with the development of the total personality of individual intellectual, social, emotional, aesthetic, moral and spiritual values. It involves developing sensitivity to the good, the right and the beautiful, ability to choose the right values in accordance with the highest ideals of life and internalizing and relishing them in thought and action which molds emotional intelligence.The goal of value education is not to promote passive conformity and blind obedience to whatever values are passed on, but to encourage critical and reflective thinking, rational choice and responsible behaviour, respecting the autonomy of the learners. When we value educating, we are putting the learners in situations that enable them to think, to reason, to question, to reflect, to care, to feel concern and act.

Inculcation of values in schools /Colleges.

❖ Morning assembly: Morning assembly should be held daily in all the educational institutions, for 15 to 30 minutes duration.

Activities of the morning assembly should be as follows.

- Prayer
- Singing of devotional or patriotic song.
- Brief ethical speech by a student, a teacher or the head.
- Sermons and spiritual discourses.
- Readings from the scriptures or great literature of the world.

❖ Redesigning the textbooks: Textbooks should be value-oriented based on our mythology and the holy scriptures.

❖ Extension lectures: Every educational institute should arrange extension lectures based on morality/value-oriented education. Experts should be invited to deliver speeches on value-oriented education.

❖ Compulsory subject: value education has to be regarded as compulsory in all schools and colleges. students must be taught the fundamental truth (i.e., universal brotherhood) which is common to all religions. There should be at least two periods a week for imparting value education.

❖ Redesigning the Curriculum: To inculcate values, the curriculum must be redesigned. Various subjects like history, geography, civics, languages, literature, art and music etc. should be taught in the view of our social, moral, cultural, spiritual and national values, deeds and achievements.

❖ Art and painting competitions: These competitions may be held on themes related to different types of values.

❖ Celebrations of Birthdays: Educational institutions should celebrate the birthdays of great men and women. Their life principles are going to add some value to students.

❖ Celebration of international days will help inculcate noble values.

❖ Use of Mass media.

❖ Book exhibitions: Every school /college should make arrangements for book exhibitions on literature related to social, moral, cultural, aesthetic and spiritual values by extending invitations to publishers and booksellers of different areas of knowledge.

- ❖ Value-oriented magazine: Every school/college should publish or borrow value-oriented magazines or journals.
- ❖ Value-oriented prizes: The persons showing gallantry, bravery, honesty, truth etc. should be identified locally and they should be honoured in social gatherings and should be given value-oriented prizes.
- ❖ Declamation contests: Debates should be organised in the institution on themes which should be related to social, moral, cultural, aesthetic and spiritual values
- ❖ Skits and dramas may be staged in the institutions on themes relating to values of life.

Conclusion

Education is a process of expediting learning, acquiring knowledge, values and virtue. It contributes to the development of better people around the globe. Emotionally intelligent person can reach his goals with the help of value added behaviuor. Education is more of an enduring method in which people gain information, skills and ethics. It imparts the strength to overcome weaknesses. It inspires us to do good deeds and makes our lives dignified. Values can help pupils understand right from wrong and they can also help to shape the mindsets and behaviour of future adults.Thus values influence emotional responses and behaviour. Emotional intelligence facilitates effective communication and relationships based on shared values.

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EXPLORING THE ROLE OF EMOTIONAL INTELLIGENCE IN PERSONAL AND ACADEMIC DEVELOPMENT

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Abstract

The word emotional intelligence is a buzzing word in the teaching and training field now a days. A man is a bundle of emotions and he needs a thorough knowledge of channelizing his emotions in a proper way so as to get the most benefits out of situations.

Emotions play a major role in the field of education. The major positive emotions are happy, love, gratitude, affection, empathy etc. Some of the negative emotions are jealous, hatred, sad, stress, depression etc. The emotions impact on both mental and physical health. They influence on the life of all in a large scale.

In this paper, I have intended to put forth some of my views relating to the developing of emotional intelligence. The word emotional intelligence is popularized by Daniel Goleman in his book "Emotional Intelligence". The term is defined as' the ability to recognize, understand and manage one's own emotions. The key factors in this process are; self- awareness, self-regulation, social awareness and social regulation.

In the education field, emotional intelligence must be made as a part of curriculum so that all the students can create happiness in their family and in the whole world. Emotional intelligence is a vital skill that one must need in this modern world. It enables the teachers and the students to have a sharpened intra and inter personal skills. This paper aims at how the emotions impact on our body and the various ways of developing emotional intelligence. It also discusses the importance of this topic in the educational field.

Key words: *emotions, intelligence, positive, negative, curriculum, education, behaviour, health.*

Introduction

At present, Emotional Intelligence has attained a vast scope in almost all the areas of study. Even the corporates have taken immense measures to train the employees in emotional intelligence. It helps one to understand his emotions. It is called as self- awareness. He can also try to analyze his emotions if they are good or bad.

The word emotional intelligence was first used by the psychologists Peter Salovey and John Mayer in 1990. Daniel Goleman has popularized in his book ' Emotional Intelligence'.

Emotional intelligence play a major role in student's learning outcomes and teaching effectiveness.

It helps students to balance his academic performances and social interactions. E I influences in the areas of cognitive skills, motivation, behaviour, and relationships with others.

We are witnessing many students committing suicide by not being able to cope up with the academic stress. We also see that they suffer from emotional imbalance in the family and even in their peer group. Having this scenario at present, it is needful to have a detailed study on the application of Emotional Intelligence.

There are many ways of developing E I. They are all practical methods. Daniel Goleman says that there four methods of developing Emotional Intelligence. One is self- awareness. Second one is self-regulation. Third one is social awareness and the last one is social regulation.

We will discuss all these steps of E I development in an individual.

The scenario of not developing E I is unimaginable. The individual can not lead a life with peace and comfort. More over he spoils the peace of the society. If one becomes angry, he shouts and quarrels. He spreads the same emotion to all around. The situation becomes chaos and confusion. If he applies the

method of self -awareness and self- regulation, he controls his angry and sees that there no strong reason for his angry and shouting.

The teacher must have E I. because she spreads the positive emotions to all the students. Hence the students begin to like her teachings. The lesson is much understandable with positive emotions. The students become cool and calm. They develop the critical thinking attitude.

It is said that the destiny of the nation is being shaped in the class room. The present students and teachers are being influenced by films and mass media. The violence, horror, crime, corruption are some of the day today telecasting themes. How can we expect the morality and integrity among the students, when they are surrounded by these flicks. Hence the domain of studying and understanding emotional intelligence come to our help.

Importance of Developing Emotional Intelligence:

Emotional intelligence is not a subject to study for the examination. It is a way of life. It must be taught and inculcated among all. It is not constrained to the students or teachers. The scope of this subject is vast. It can be applied to sociology, industry, commerce, health care, and other areas. Each and every person on this world need to understand it to live happily with his fellow beings, animals and nature as well.

Another reasons emotional intelligence is important is its impact on interpersonal relationships. People with high EI are better equipped to understand and respond to the emotions of those around them, which fosters stronger connections and trust. Whether in personal relationships or within a team at work, the ability to empathize and communicate effectively reduces misunderstandings and conflicts, creating a more harmonious environment.

E I has profound effects on personal well-being. People with higher EI tend to have better emotional regulation. They can manage stress, anxiety, and frustration more effectively. They are more resilient, overcoming from setbacks with a positive mindset. This ability to handle emotions in a balanced way contributes to better mental health and overall life satisfaction.

For professionals like doctors, engineers, marketing personnels, managers, emotional intelligence is critical. It is a base for leadership. Leaders with high EI are adept at managing their own emotions, they can stay calm under pressure and guide their teams through challenging situations. They inspire and motivate others, not through fear or authority, but through understanding and compassion. Such leaders create a culture of respect and openness, where employees feel valued, leading to increased job satisfaction and productivity.

Emotional intelligent is not a soft skill. Its domain is abstract. It is life itself. It does not deal not only with human beings, but also their relationships with nature. One can be a perfect personality with the help of this subject. Hence it is a humble advice to include some of the topics of E I in the curriculum to build a good and useful society and a strong nation as well.

Some of the Approaches of Developing Emotional Intelligence

There are many approaches to develop E I in our life. These approaches are to be trained and inculcate in the life. The methods involved are self- awareness, empathy, motivation, social awareness and social regulation.

Self- Awareness:

Self-awareness is the foremost approach of emotional intelligence. One should start by paying attention to your emotions throughout the day. The different situations affect your mood and reactions. One should keep a journal is a great way to track these patterns and reflect on how emotions influence our

behavior. Self-reflection helps to understand not only what you are feeling but why you are feeling it. It allows to respond to situations more thoughtfully instead of reacting impulsively.

Self – Regulation:

Self – regulation refers to the control of emotional reaction. Many a times we face stressful situations, tensed circumstances. The immediate reactions may lead to harmful situations. Mind Synergy, mind fullness, deep breathing, meditation help much in controlling emotions. One must see the reasons for creating emotions. If the person is sad, he must regulate it seeing the reasons for his sadness. Then he must begin some activities like playing, reading, watching movies and other dopamine released activities. This skill can be mastered over a period of time.

Developing the Quality of Empathy:

Empathy is understanding the feelings of others. It is sharing and caring. If a person develops empathy, he listens well, judges the emotions correctly and understand the society at large. At the initial stage, empathy is expressed facially and with kind words. The next level is moving forward to help and to get deeper connect with the people in the society. The students must be taught in developing this positive emotions so that all will be happy and he can make happy.

Social Awareness and Social Regulation :

We know well that man is a social animal and he has emotional connection with the society. One must have open mindedness and express his thoughts clearly to improve his social skill.

Social awareness refers to the awareness of people's feelings around us. Social regulation is how to behave and what to talk, what not to talk so as to develop good relationship with the people around. Certain basic social skills are appreciating, active listening, partaking in the social gathering, resolving problems, avoiding conflicts etc.

The social media play a major role in creating social awareness among all. One must be resilient in his actions and speech. So that he can not be easily lured by the false information and news. If we adopt the concept of social awareness in our curriculum, students would certainly learn how to tolerate others and justify their actions. Most of the criminal activities can be avoided by this approach.

Motivational Approach:

This is one of the best approaches to develop emotional intelligence. Many people are motivated by their goals and they do and feel emotionally what is connected to their life goals. They have a mind set to regularize their emotions and they are good at social awareness. For some people or the students, motivation is required through stories, anecdotes and experiments. This approach would help in transforming the behaviours, attitude and positive communication skills.

Conclusion:

So for we have discussed the term of emotional intelligence and the importance and the approaches in developing E I.

After understanding all these, we can come to the conclusion that it can be applied to the field of education, where every student and teacher is in need of developing emotional intelligence. It caters to the need to one's life and improvisation of the society in an ethical way. The mental health as well as physical health can be attained through it. As a teacher educator, it is our responsibility to create awareness and teach E I along with the teaching training.

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A COMPARATIVE STUDY OF SOCIAL INTELLIGENCE, EMOTIONAL INTELLIGENCE AND SELF-CONCEPT OF B.ED., TEACHER TRAINEES OF MANGALURU AND CHIKMAGALURU DISTRICT

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Introduction

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation.

The teacher must be at the centre of the fundamental reforms in the education system. The new education policy must help re-establish teachers, at all levels, as the most respected and essential members of our society, because they truly shape our next generation of citizens. It must do everything to empower teachers and help them to do their job as effectively as possible. The new education policy must help recruit the very best and brightest to enter the teaching profession at all levels, by ensuring livelihood, respect, dignity, and autonomy, while also instilling in the system basic methods of quality control and accountability.

Emotional intelligence (also known as emotional quotient or EQ) is the ability to understand, use, and manage your own emotions in positive ways to relieve stress, communicate effectively, empathize with others, overcome challenges and defuse conflict. The term emotional intelligence was created and introduced by two researchers, Peter Salovey and John D Mayer in their article "Emotional Intelligence" in the journal Imagination *Cognition, and Personality in 1990. It was later popularized by Dan Goleman in his 1995 book Emotional Intelligence.*

And then came *Social Intelligence – SQ*. Postulated by psychologist Edward Thorndike, it was later reinvented by psychologists like Howard Gardner and Daniel Goleman. Gardner proposed that there are multiple intelligences, out of which he talked about two important ones *intrapersonal intelligence* and *interpersonal intelligence*. According to him, interpersonal intelligence includes sensitivity towards others' moods, feelings, temperaments and motivations; and ability to cooperate as part of a group. Gardner equated it with Daniel Goleman's *Emotional Intelligence*.

In later development, Goleman wrote his famous book *Social Intelligence: The New Science of Social Relationships* in 2006, through which he separated two of the emotional-intelligence competencies– social-awareness and relationship-management – into a separate concept *social intelligence* thus giving a new name '*Emotional and Social Intelligence (ESI)*. Thus, social intelligence is extension or a superset of emotional intelligence. It is a broader concept than emotional intelligence. So, in a way, where emotional intelligence leaves, Social Intelligence takes it up from there, and makes it more of a tangible applicable skill.

Social Intelligence is the ability to understand one's own and others' actions. Social intelligence is learned and develops from experience with people and learning from success and failures in social settings. It is an important interpersonal skill that helps individuals succeeds in all aspects of their lives. Social intelligence is a skill that can be gained through the day-to-day life experiences of understanding people and navigating one's behaviour to develop social connections. It is about a person's ability to communicate effectively and interact with people in an empathetic and assertive manner. Social intelligence is a quality that comes from the awareness of one's inner self and practising effective emotional management. Social intelligence is an important social skill that helps a person to develop their personality and become an active and valuable part of society.

Self - Concept refers to how someone thinks about perceives or even evaluates them. Basically Self - Concept is developed through interaction with others. It is consistent or constant. A person with a positive self-concept is cheerful, secure, and content. But a person with a poor self-concept is often unpleasant, insecure, and unhappy. When self-concept improves, personality and performance improve. So self-concept personality and performance are positively correlated.

National Curriculum Frame Work (NCF 2000) as well as **NCF 2005** for School Education by **NCERT** emphasizes teachers on acquisition of following qualities for quality education:

- Teachers need to be prepared to care for children and should love to be with them.
- Understand children within social, cultural and political context, emotional context and psychological context.
- Teacher should see the child's talk as a resource rather than a nuisance.

This indicates that teacher has a great responsibility of securing future of younger generation. He or she is answerable for all the issues related to students and their overall development. He is not merely the agent of transforming knowledge from book to the children but his work is beyond the knowledge transform.

The teacher has to shape the minds of his/her students on positive lines, develop scientific and humanistic attitude and self-discipline. He/she has to influence the life and character of students and give them ideas and values which will first fit them to enter the stream of social and national life and as worthy citizens.

From the above discussion it is found that to be a good teacher one must have qualities such as Emotional Intelligence, Social Intelligence, which strengthens the student teacher relationship, and Self - Concept.

Design of the Study

The present study was descriptive survey in nature.

Sample

A sample of 200 B.Ed., Teacher Trainees of different educational colleges from Mangaluru and Chikmagaluru district was chosen for the present study. Random Sampling technique was employed for the selection of sample.

Tool Used

Social intelligence scale (SIS):

This questionnaire was developed by Chadha and Ganesan (2004) of University' of Delhi. It consists of 66 items which measure social intelligence of the subject in 8 dimensions-patience, co-operativeness, confidence, sensitivity, recognition of social environment, tactfulness, sense of humour, and memory.

Emotional Intelligence Questionnaire (EIQ)

This questionnaire was developed by Daniel Golman (1995). It consist of 50 items which measure Emotional Intelligence of the subject in 5 dimensions – Self-awareness, managing emotions, Motivating oneself, Empathy and Social skill.

Self-concept

This questionnaire was developed by Dr Rajkumar Saraswat (1996). It consists of 42 items which measure Self-concept of the subject in 6 dimensions – physical, social, temperamental, educational, moral and intellectual aspects of themselves.

Objectives of the study

1. 1. To study the Social Intelligence, Emotional Intelligence & Self-concept of B.Ed., teacher trainees of Mangalore & Chikmagaluru District

2. To find out the levels of Social Intelligence of B.Ed., teacher trainees

3. To find out the levels of Emotional Intelligence of B.Ed., teacher trainees

4. To find out the levels of Self-concept of B.Ed., teacher trainees

5. To find whether there is any significant difference in the Social Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

6. To find whether there is any significant difference in the Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

7. To find whether there is any significant difference in the Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru distrct.

8. To study whether there is a significant relationship among Social Intelligence, Emotional intelligence and Self -Concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

Analysis of Objectives

Analysis of Objective One

1. To study the Social Intelligence, Emotional Intelligence & Self-concept of B.Ed., teacher trainees of Mangalore & Chikmagaluru District

Table 1: Details of Descriptive Analysis of Social Intelligence of B.Ed., teacher trainees of Mangalore & Chikmagaluru District

Descriptive	Social Intelligence	Emotional Intelligence	Self-concept
N	200	200	200
Mean	88.33	177.60	144.21
Median	89.00	176.00	145.00
SD	6.07	18.99	15.24
Range	33.00	141.00	72.00
Minimum	68.00	99.00	107.00
Maximun	101.00	240	179.00
IQR	7.00	24.750	21.750

From the above table 1, it is observed that Mean of Social Intelligence of B.Ed., teacher trainees was found to be 88.33 with S.D 6.07. Also we have median 89 & IQR OF 7. Similarly Mean value of Emotional Intelligence was found to be 177.60 with S.D 18.99, Median as 176 & IQR of 24.750. It was also found that Mean value of Self-concept of B.Ed., teacher trainees was 144.21 with S.D 15.24, Median value as 145 & IQR of 21.750.

2. To find out the levels of Social Intelligence of B.Ed., teacher trainees

Table 2: Levels of Social Intelligence of B.Ed., teacher trainees

Categories	High Social Intelligence (HSI)	Average Social Intelligence (ASI)	Low Social Intelligence (LSI)
Norms	M+1S.D ABOVE	M+1S.D TO M-1S.D	M-1S.D BELOW
Number	37	137	26
Percentage	18.5%	68.5%	13%

From the above table it was concluded that only 18.5% of the B.Ed., teacher trainees Possessed High level Social Intelligence, 13% B.Ed., teacher trainees possessed low level Social Intelligence and majority (68%) of them showed Average level Social Intelligence.

Thus it was concluded that Majority of the B.Ed., teacher trainees Possessed Average .level Social Intelligence

3. To find out the levels of Emotional Intelligence of B.Ed., teacher trainees

Table 3: Levels of Emotional Intelligence of B.Ed., teacher trainees

Categories	High Emotional Intelligence (HEI)	Average Emotional Intelligence (AEI)	Low Emotional Intelligence (LEI)
Norms	M+1S.D ABOVE	M+1S.D TO M-1S.D	M-1S.D BELOW
Number	33	145	22
Percentage	16.5%	72.5%	11%

From the above table it was decided that 16.5% of B.Ed., teacher trainees showed High level Emotional Intelligence, only 11% B.Ed., teacher trainees showed low level Social Intelligence and majority (72.5%) of them showed Average level Emotional Intelligence.

Thus it was decided that Majority of the B.Ed., teacher trainees Showed Average .level Emotional Intelligence

4. To find out the levels of Self-concept of B.Ed., teacher trainees

Table 4: Levels of Self-concept of B.Ed., teacher trainees

Categories	High Self-concept (HSC)	Average Self-concept (ASC)	Low Self-concept (LSC)
Norms	M+1S.D ABOVE	M+1S.D TO M-1S.D	M-1S.D BELOW
Number	30	140	30
Percentage	15%	70%	15%

From the above table it was observed that 15% of B.Ed., teacher trainees falls under High level Self-concept, 15% B.Ed., teacher trainees falls under low level Self-concept and majority (70%) of them falls under Average level Self-concept.

Thus it was concluded that Majority of the B.Ed., teacher trainees fall under Average level of Self-concept.

5. To study whether there is a significant difference in Social Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

In order to check the significance of this difference a null hypothesis was formulated as

Ho1: There is no significant difference in Social intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

The analysis and interpretation of the data related to this hypothesis was done with mean, SD and 'z' value (Mann-Whitney 'U' test). The result has been presented in the table 6

Table 6: Summary of the Test of Significance on Social Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

Districts	N	MEAN	SD	'z' value	p
Mangaluru	100	89.36	6.78	2.43	0.031
Chikmagaluru	100	87.29	5.09		significant

From the table 8, it is observed that with regard to Districts the 'z' value is found to be 2.43 having the significant level 0,031. Hence the formulated null hypothesis 'There is no significant difference in Social intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district', was rejected. Thus it can be concluded that there is a significant difference in Social intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru District.

6. To study whether there is a significant difference in Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

In order to check the significance of this difference a null hypothesis was formulated as

Ho2: There is no significant difference in Emotional intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

The analysis and interpretation of the data related to this hypothesis was done with mean, SD and 'z' value (Mann-Whitney 'U' test). The result has been presented in the table 7.

Table 7: Summary of the Test of Significance on Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

Districts	N	MEAN	SD	'z' value	Remarks
Mangaluru	100	178.46	21.68	1.00	0.32 significant
Chikmagaluru	100	176.72	15.91		

From the table 7, it is observed that with regard to Districts the 'z' value is found to be 1.00 having the significant level 0.32. Hence the formulated null hypothesis 'There is no significant difference in Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district', was rejected. Thus it can be concluded that there is a significant difference in Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru District.

7. To study whether there is a significant difference in Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

In order to check the significance of this difference a null hypothesis was formulated as

Ho3: There is no significant difference in Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

The analysis and interpretation of the data related to this hypothesis was done with mean, SD and 'z' value (Mann-Whitney 'U' test). The result has been presented in the table 8.

Table 8: Summary of the Test of Significance on Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

Districts	N	MEAN	SD	'z' value	P
Mangaluru	**100**	**148.52**	**14.78**	**4.09**	**0.001significant**
Chikmagaluru	**100**	**139.90**	**14.52**		

From the table 8, it is observed that with regard to Districts the ''z' value is found to be 4.09 having the significant level 0.001. Hence the formulated null hypothesis 'There is no significant difference in Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district', was rejected. Thus it can be concluded that there is a significant difference in Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru District.

8. To study whether there is a significant relationship among Social Intelligence, Emotional intelligence and Self -Concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

a) To study the relationship between Social Intelligence and Emotional intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district, the null hypothesis titled 'There is no significant relationship between Social Intelligence and Emotional Intelligence B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts' is formulated. Details of the analysis are presented in the following table 9.

$H_0 4$: There is no significant relationship between Social Intelligence and Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts'

Table 9: Relationship between Social Intelligence and Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts.

Variables	N	r value	Verbal interpretation
Social Intelligence	200	-0.19	0.008 significant
Emotional Intelligence	200		

From the table 9, it is clear that 'r' value -0.19 between Social Intelligence and Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts, is week negative correlation. In the light of this result it could be interpreted that there is a low negative relationship between Social Intelligence and Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts.

b) To study the relationship between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district, the null hypothesis titled 'There is no significant relationship between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts' is formulated. Details of the analysis are presented in the following table 10.

$H_0 5$: There is no significant relationship between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts.

Table 10: Relationship between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

Variables	N	r value	Verbal interpretation
Social Intelligence	200	0.12	0.105 sig
Self-concept	200		

From the table 10, it is clear that 'r' value 0.12 between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Distrcts, is week positive correlation. In the light of this result it could be interpreted that there is a low relationship between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts.

c) To study the relationship between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru distrct, the null hypothesis titled 'There is no significant relationship between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts' is formulated. Details of the analysis are presented in the table 11.

H$_0$6: There is no significant relationship between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts

Table 11: Relationship between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru district.

Variables	N	r value	Verbal interpretation
Emotional Intelligence	200	-0.04	0.6
Self-concept	200		

From the table 11, it is clear that 'r' value -0.04 between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Distrcts, is week negative correlation. In the light of this result it could be interpreted that there is a negative and low relationship between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts.

Major findings of the study

1. Majority of the B.Ed., teacher trainees showed Average .level of Social Intelligence, Emotional Intelligence and Self-concept.

2. Both Mangaluru and Chikmagaluru District B.Ed., teacher trainees differ in their Social Intelligence, Emotional Intelligence and Self-concept.

3. There is a significant low negative relationship between Social Intelligence and Emotional Intelligence of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts.

4. There is a significant low relationship between Social Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts.

5. There is a significant negative and low relationship between Emotional Intelligence and Self-concept of B.Ed., teacher trainees of Mangaluru and Chikmagaluru Districts.

Educational Implications of the study

1. Since the B.Ed., teacher trainees of Mangaluru and Chikmagaluru districts have average level of Social Intelligence, Emotional Intelligence & Self-concept; there is a need of improving Social Intelligence, Emotional Intelligence & Self-concept from average to high level. Teachers can improve

the status of their Social Intelligence, Emotional Intelligence and Self-concept by understanding the basic concepts of these variables (*Susheela Narang 2017*).

2. Education Department has to give special care to empower the Social Intelligence, Emotional Intelligence and Self-concept of B.Ed., teacher trainees. Government must encourage them to enrol for the corresponding or online training courses on these three variables (Choudhury, M.K. & Choudhury, S.K 2013; Hans, A., Mubeen, S.A., & Rabani, R.S.S 2013; *Sunil Kumar M.L 2023*).

3. Self - Concept of B.Ed., teacher trainees is essential to assess them to know their strengths and weaknesses and various aspects of their own personality. It helps in modify them in positive way to become a successful teacher. The B.Ed., teacher trainees are to be given exposure to workshops and conferences to empower their Self – Concept (Ponmozh. D, Govindamma 2024).

4. In the curriculum of teacher education, the theory as well as practical part or learning experiences on Social Intelligence, Emotional Intelligence and Self- Concept are to be added. Thus, the knowledge and skills of developing these variables can be planned to become an effective teacher (Choudhury, M.K. & Choudhury, S.K 2013; *Sunil Kumar M.L 2023*).

5. NCERT and DSERT must take initiative to provide professional Development programs and study the impact of programs in the classroom and to take remedial steps to improve their Self - Concept dimensions (Ponmozh. D, Govindamma 2024).

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VALUE BASED EDUCATION PLAYS A CRUCIAL ROLE IN FOSTERING WELLBEING AMONG ADOLESCENTS

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Introduction

Adolescence is a transformative phase of life marked by significant emotional, psychological, and social development. During this period, individuals form their identities, values, and worldviews. While academic education is essential, it is equally important to provide adolescents with value-based education, which plays a crucial role in shaping their character, emotional intelligence, and overall wellbeing.

The present youth is being exposed to violence, dishonesty, cheating and other social evils. Moral values will guide them to decide what is right or wrong, good or evil, justice or injustice. The solution of social evils is only through imparting value education. Adolescents learn that fulfilling desires by improper ways or immoral activities is wrong and that one should not jeopardize the interest of other people in pursuit of selfish gains.

Value-based education serves as a foundation that instils ethical principles, fosters social responsibility, and equips young individuals to navigate life's challenges with confidence and resilience. The application of values in real life situation starts in the true sense at this age.

1. Understanding Value-Based Education

Value-based education refers to the type of learning that emphasizes moral values, ethics, and life skills, alongside traditional academic subjects. This form of education helps students distinguish between right and wrong and enables them to make decisions that are not just beneficial for themselves but also for the society at large.

It goes beyond textbook knowledge, nurturing students' moral and emotional development.Values such as right conduct, honesty, compassion, responsibility, respect, empathy,truthfulness, belief, courage, faith, discrimination, integrity, sincerity, wisdom, self-confidence, appreciation, charity, good habits, conscience, courtesy, dedication, discipline, duty, humility, responsibility, self-control, peace, calmness, concentration, control of desires, happiness, harmony, intelligence, joy, patience, love, acceptance, affection, brotherliness, devotion, forgiveness, friendship, kindness, selflessness, trustworthiness, non-violence, benevolence, consideration, spirit of co-operation, forbearance, harmlessness, tolerance, unity in diversity are imparted through this form of education.

Developing unconditional love, respect, co-operation and kindness towards others help to appreciate diversity and work collaboratively with others. Value based education is establishing correspondence between the ideal of education, domains of human personality and the five universal human values.

The focus is mainly on human personality and it is holistic in presentation. It is based on the understanding that everyone has an intrinsic quest for self-development, an inner urge to awaken the deeper consciousness. The longing to realise the divinity is matched by conscious effort and it leads to positive change during the adolescent stage.

Sl. No.	Ideals of Education	Domains of Personality	Human Values excelling in the five domains
1	Knowledge	Intellectual	Truth (sathya)
2	Skill	Physical	Righteousness (dharma)
3	Balance	Emotional	Peace (shanthi)
4	Vision	Psychic	Love (prema)
5	Identity	Spiritual	Non-violence (ahimsa)

Adolescents cannot develop a complete personality unless their relative values grow into absolute values. Relative values such as knowledge, skill, balance, gentleness and identity develop the whole individual.

2. Role of Value-Based Education in Adolescents' Wellbeing

Adolescence is often accompanied by a sense of confusion and vulnerability, as individuals grapple with emotional changes and peer pressures. Value-based education helps adolescents develop a moral compass, allowing them to navigate these complexities with clarity and purpose. It strengthens their mental and emotional wellbeing by:

- **Building Self-Esteem and Confidence:** Value-based education encourages adolescents to recognize their strengths, accept their weaknesses, and cultivate a positive self-image. It nurtures self-awareness, helping them understand their emotions and how to manage them.

- **Developing Empathy and Compassion:** Through the teaching of values like kindness, tolerance and empathy, students learn to appreciate the perspectives of others. Developing tolerance will help adolescents resilient against different forms of hate, resist hostility, raise awareness of cultural difference and cultivate an acceptance of others. This fosters healthy relationships and a sense of community, thereby, reducing feelings of isolation and loneliness.

- **Enhancing Emotional Intelligence:** Adolescents who are taught values such as patience, gratitude, and emotional regulation are better equipped to handle stress, anger, and frustration. Emotional intelligence is critical for their overall mental health and wellbeing.

- **Promoting Ethical Decision-Making:** Adolescents frequently face situations that challenge their integrity. Value-based education helps them make decisions based on ethics and responsibility, rather than on impulse or external pressures. They learn that Honesty and Hard work pays in the long run and Compassion and forgiveness leads to harmony in family and society.This also strengthens their ability to resist negative influences, such as peer pressure.

3. Social Responsibility and Civic Engagement

Adolescents who receive value-based education are more likely to develop a strong sense of social responsibility. They are taught the importance of giving back to their communities and contributing to the welfare of society. This not only makes them responsible citizens but also provides them with a sense of purpose and belonging.

Responsibility towards the community like working for disaster relief or for a Handicap Institute is Selfless service and it is a source of great joy. Community Service is a Duty to serve with Love.

Civic sense towards School property and National property is sacred. Adolescents should learn not to damage or destroy them in their excitement or due to any feuds.

When adolescents engage in community service, environmental conservation, or any other acts of kindness, they feel empowered and connected to the world around them. This positive engagement plays a significant role in enhancing their sense of wellbeing.

4. Character Building and Lifelong Skills

Character is far more comprehensive and it penetrates into the deeper layers of individual's personality than mere moral behaviour. Character building is one of the most significant outcomes of value-based education. Adolescents develop traits such as perseverance, courage, and humility, which help them navigate the ups and downs of life. These values are not just applicable in their adolescent years but carry over into their adulthood, shaping them into responsible and compassionate individuals.

Value-based education also equips adolescents with essential life skills. Time management, conflict resolution, teamwork, and effective communication are some of the skills that are nurtured through value-driven learning. These skills are invaluable for their personal and professional success in the future.

- **Personality Development:** It is necessary to develop an integrated personality of adolescents - the faculties i.e. physical, mental, intellectual, vital and intuitive energies have to be tapped, developed simultaneously and channelised properly. It is true that the destiny of a nation lies in its class rooms.
- **Promoting Psychosocial competence:** There is a need to develop an adolescent's ability to deal effectively with demands and challenges of everyday life, especially where the behaviour is related to an inability to deal effectively with stress and pressures in life. Life skills help in decision making, problems solving, creative and critical thinking, effective communication, interpersonal relationship skills, self-awareness, coping with emotions and stress.
- **Adolescent Well-being:** It is essential to develop a sense of well-being in adolescents to elevate their sense of contentment, life satisfaction and lead a life of harmony with various segments of society. Adolescents experience wellbeing when there life is nurtures by love, health and spirituality. There are different ways to develop a sense of wellbeing in adolescents. It entails sustaining a healthy lifestyle, having robust connections with their community through their friends and family and learning to handle emotions for a sound mental wellbeing

5. The Role of Schools and Educators

The stage of adolescents is a period of diversified interests and experience. Their enquiring mind is ever ready to question and expect rational answers. Their mind is beginning to compare, contrast and discriminate. At the same time rapid psycho-physiological changes are also taking place in their personality. Some of these trends are disturbing and confusing, which require adjustment with the external world, hence, expectations and aspirations increase in the same proportion. They are in search of ideals and models of excellence in all walks of life. They are prepared to take risks, to meet challenges and ready for self-sacrifice. They are in search of a consistent, stable system of values which would

enable them to harmonise their relations with the social world of people, the social system and the material world.

Imparting Human values fulfils the ultimate mission of education. Schools play a pivotal role in integrating value-based education and culture into their curriculum. The mission of value based education is to transmit knowledge and life skills necessary to navigate through the journey of life safely, effectively and with a modicum of happiness. By fostering a supportive and inclusive learning environment, schools can help adolescents feel valued and heard. It contributes to their emotional and psychological wellbeing. Value Education is a transformational life long process.

Teachers serve as role models and mentors, guiding students through moral dilemmas and encouraging ethical behaviour. For an effective transfer of values, a close contact between the teacher and the taught is essential. Teachers and students must live and grow together in an atmosphere of mutual trust and unity. This helps students,in their adolescence stage,develop a wholesome and balanced personality, one where academic competence is supplemented with good character. Teachers can provide ample opportunities to practice what has been taught in class.

The school should provide for self- expression of students in diverse fields of activities which may trigger their inner urge to excel and contribute. Projects and activities related to the Integral education dimensions of Devotional, Cultural, Physical and Service need to be held regularly.

There are various approaches of imbibing values in adolescents are -

- Direct approach
- Indirect / Incidental approach
- Integrated approach

A direct approach like moral instructions can work. An impact on them could be through their subjects, play-way methods. An indirect approach is by incorporating values into their lesson plans and practiced in all extra-curricular activities. The integrated approach Human Values can be induced in the youth in various ways. Group activities with a number of attractive and instructive teaching aids make the instrumental course interesting and effective.

The ultimate goal of Value Education is to assist students to attain a humane and caring society. It helps develop integrity, ethics, moral values and self confidence in adolescents.

Extracurricular activities such as debate, oration, group discussions, music,prayers, art, Sloka chanting, group singing, bhajans, story- telling, meditation will enable the adolescents to look within, to introspect and to evaluate their goals in life objectively. These also provide scope for expression, love and peace as inherent aspects of human potential.

Group activities like rock climbing, exploration in nature and trekking provide avenues for release of physical energy and help build up team spirit, will power and discipline. Games must have set of rules and a code of conduct, and an adherence to these rules would ensure spirit of healthy competition. It should be for their greater good.

Adolescents must be encouraged to read inspiring literature, listen to elevating music and view meaningful audio visuals like informative documentaries, patriotism, adventure, mythology, mystery, action and humour. Schools should hold regular talks by eminent speakers.

Unless such constructive engagements are proposed and incorporated, adolescents may engage in negative and damaging pre occupation. To minimise the possible negative influences, emphasis while discriminating should be on what is right rather than what is wrong.

6. Parental Involvement

The role of parents in value-based education is equally important. Family plays a foundational role in shaping adolescent behaviour. The quality of the parent-child relationship, family dynamics, communication and home environment influences how adolescents navigate the challenges their age. Adolescents look up to their parents as their first teachers, and the values imparted at home significantly influence their character development. Families play a vital role in instilling moral values and ethical principles in adolescents

Open communication, Discussions, about right and wrong, consistent guidance from parents and a mutual respect amongst each other helps to reinforce the lessons learnt in schools.It helps to shape the adolescent's world view and social behaviour.

Parents must supplement at home the training given by teachers in school. Adolescents must be led into good ways of living a simple life with humility and discipline. Knowledge can be given by teachers, however, discipline, control of senses and behaviour must be administered by parents.

Parents must combine love and law. While teaching with love, there must be an aspect of discipline. The obligation of parents does not end with merely providing food, schooling and knowledge of worldly matters. They must provide right values. Unintelligent affection gives rise to indiscriminate freedom in adolescents. Unlimited freedom is highly disastrous. Hence, Discipline is a must when they are developing their physical, mental and spiritual abilities. It helps them to learn to control their mind, desires and senses. Disciplinary rules have to be thought out and adapted according to age. When adolescents go astray parents must hasten to correct their faults and bring them back to the right path. Parents must fix a time every day to read spiritual books, chant, meditate and offer prayers.

Conclusion

In conclusion, value-based education is essential for fostering wellbeing among adolescents. By teaching values such as compassion, responsibility, and integrity, adolescents are empowered to build meaningful relationships, make ethical decisions, and contribute positively to society. It not only strengthens their moral and emotional foundation but also equips them with the life skills necessary to succeed in an increasingly complex world.

Value based education dimensions help develop a strong character and positive qualities in students, including a broadened perspective on life, self-confidence and self-reliance, dignity of labour and respect for work, determination, dedication and commitment, sense of equanimity, creativity and innovation, teamwork, selfless service, leadership, entrepreneurship, time management and the quest for excellence.

In a rapidly changing society, where adolescents are often exposed to conflicting ideals and pressures, value-based education provides them with the tools they need to grow into well-rounded, empathetic, and responsible individuals.

It is necessary to take the help of all sections of society like the educational agency, Mass media, social workers, Teachers and Parents. Seminars have to be held, Proposal must be put forth after holding discussions on a variety of value-based topics, whole-hearted decisions have to be implemented without further loss of time.

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INNOVATIVE TEACHING PRACTICES AND METHODOLOGIES IN TEACHER EDUCATION

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1. Introduction:

The quality of educational process largely depends upon the quality of teachers. Though teaching is being considered as a science and a skill, basically it is a sublime art. Teacher education system is an important vehicle to improve the quality of school education. The revitalization and strengthening of the teacher education system is a powerful means for the upliftment of educational standards in the country. There are many issues that need urgent attention for improving the quality of teacher education programme. One of them is the need of innovations in teacher education programme. NPE (1986) stated "The existing system of teacher education needs to be overhauled or revamped." There are some resisting factors in our education system which prevents the teacher education institution from being innovative such as lack of physical facilities and funds, lack of diffusion of innovations among teacher educators, rigid framework, lack of research orientation etc. The biggest challenge any teacher faces is capturing the students" attention, and putting across ideas in such a way that it stays with them long after they have left the classroom .For this to happen, classroom experience should be redefined and innovative ideas that make teaching methods more effective should be implemented . So There are innovative ideas that will help teachers reinvent their teaching methods and make their classes interesting. Instead of taking the traditional lectures and textbooks route, modern teaching methods employ various innovative methodologies to keep students engaged and learning actively.   Innovativeness means the ability to think beyond the boundaries and create something which is different from that which already exists. Without innovations, no progress is possible. Teachers have to be innovative and their grooming has to start from their training institutions.

2. Methods of Innovative Teaching:

Innovative teaching means creativity and novelty of the. teacher which changes the style and method of teaching. Modern teaching focuses on the entire learning process, rather than focusing strictly on the final result, and is dedicated to helping students build skills as part of a constructivist approach to learning. In the present system of teacher education programme in India some of the innovative ideas to be practiced and focused they are: co-operative and collaborative learning, team teaching, reflective teaching, constructivism, blended learning, soft skills, Teacher-Centered Instruction. Small Group Instruction, Project-Based Learning. Inquiry-Based Learning and Flipped Classroom.

a) Cooperative Learning: Cooperative learning is an effective teaching procedure wherein little groups, each with students of various degrees of capacity, utilize multiple learning activities to improve their comprehension and understanding of a subject. Every individual from a group can realize what is educated and help other teammates learn, consequently making an air of accomplishment and attainment. Students perform through the task until all group members effectively comprehend and accomplished it.

b) Face to face interaction: It includes Orally explaining how to solve problems Teaching one's knowledge to other, Checking for understanding, Discussing concepts being learned and   Connecting present with past learning.

c) **Interpersonal and Social-Group Skills:** it covers such as Leadership Decision-making, Trust-building, Communication and Conflict-management skills.

d) Learning through Argumentation: Argumentation helps students attend to contrasting ideas, which can deepen their learning. It makes technical reasoning public, for all to learn. It also allows students to refine ideas with others, so they learn how scientists work together to establish or refute claims.

e) Reflective teaching: Reflective teaching is a personal tool that teachers can use to observe and evaluate the way they behave in their classroom .It can be both a private process as well as one that you collect information regarding what went on in your classroom and take the time to analyses it from a distance, you can identify more than just what worked and what didn"t Reflection refers to the ongoing process of critically examining and refining practice ,taking in to careful consideration the personal, pedagogical, societal and ethical contexts associated with schools classrooms and the multiple roles of teachers.

f) Blended-Learning: Blended –learning describes an approach to learning where teachers use technology, usually in the form of Web-Based instruction, in concert with and as a supplement to live instruction, or perhaps utilize components of a learner –centered Web course with components that require significant instructor presence and guidance.

g) Use of soft-skills: Soft skills are personal attributes that enhance an individual's interaction, job performance and career prospects and hard skills which tend to be specific to a certain type of task or activity. Soft skills refer to personality traits, social gracefulness, and fluency in language, personal habits, friendliness and optimism that mark people to varying degrees. Soft skills are broadly applicable in teacher education programmed, thus the curriculum of teacher education could contribute to the development of a holistic human capital that can foster economic ,social and personal development.

h) Brain Storming: Make time for brainstorming sessions into your classrooms. These sessions are a great way to get the creative juices flowing. When you have multiple brains focusing on one single idea, you are sure to get numerous ideas and will also involve everyone into the discussion

3. Teaching Practices: Teaching is the knowledge, strategies , processes and behaviors which lead to good students outcomes. Teachers have a positive impact on their students and use their expertise to improve learning. Those good outcomes are often those that can be be measured easily, usually through summative assessment. Also by good practices in the schools and colleges teacher can do their best in the way that first reflect on your practice. Be the first to add your personal experiences. Seek feedback and collaborations, pursue professional development, experiment with new strategies, evaluate your impact, keep learning and growing, develop reciprocity and cooperation among students, encourage active learning, emphasize time task and communicate with high expectations.

4. Conclusion: To conclude, we can say that research has demonstrated that all the above methods and practices   will assist a teacher in promoting and encouraging student learning and scholarly accomplishment, increase student retention and enhance student satisfaction with their learning experience. Besides, it will assist students with creating abilities in oral correspondence. It will help them build up their social aptitudes, notwithstanding that it will advance students' confidence and

advance positive race relations. Apart from these also we can use the following stratigies for the personality development of the student teachers and teacher education teacher-centered Learning. Project-Based Learning. Social Emotional Learning. Inquiry-Based Learning. Problem-based Learning. Personalized Learning.

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A STUDY ON CREATIVITY AND ABILITY FOR COMPREHENSION OF 9TH STANDARD STUDENTS OF MYSORE TALUK

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Introduction

The present study titled "A study on the Ability for Comprehension and Creativity of Ninth Standard Students of Mysore Taluk" is a descriptive survey study.

Education has proved to be useful in the development of human race. Number of components of education contribute for the growth and development of an individual. Among these some are the abilities developed within the individual and some other are the product of environment. Language plays an important role in the early childhood education in any educational system. Language is not only taught as a subject but is also used as the medium of instruction for teaching different school subjects right from the beginning. Language is the foundation of all our social relations for it is the primary medium by which we communicate our ideas and meaning to others.

Dewey says that the primary motive of language is to influence the activity of others. Its secondary use is to enter into more intimate social relations with them and the third and final use of language is in the acquisition of knowledge. Thus, this important aspect of the child's language develops in relation to the needs of the child.

Creativity is highly precious fascinating human endeavour. It is difficult to bind creativity in words nevertheless creativity may mean to carve out something new, may it be original or may it be the outcome of critical analysis of the existing ideas. Creativity is a thinking process. It is the act of selection from those to yield a construct of new patterns, new track of search for destination, new thought process, new style, new designs or new products.

Creativity is something everyone possesses in varying degrees, it occurs at almost all ages and in all fields of human endeavour. Some part of one's creative behaviour is resent right from his childhood. Whereas some other part is nurtured by parents, society and environment.

According to Psychologists, "Creativity is a multi-dimensional attribute distributed differentially among individuals and it includes chiefly the abilities of fluency, flexibility, originality and elaboration.

According to Guilford (1975) "four abilities viz fluency, flexibility, originality and elaboration characterize creative thinking".

According to Gupta (1980) "Creativity has been studied from time to time under different heads like imagination, intuition, inventiveness, discovery, far-sightedness, giftedness and originality".

Fluency: Fluency is the ability of the individual who "expresses in a constant stream of communication" or total number of the responses made regarding a stimulus object.

Flexibility: It is the ability "to jump readily from one idea to another" or creation of categories of responses. This is observable when the learners are able to construct as well as reconstruct their own ideas. Flexibility could be spontaneous and also adaptive.

Originality: It is related to statistically infrequent responses made regarding a stimulus object.

Elaboration: It is related to embellish or expand an idea. Learners having this ability can explain are the major as well as minor details pertaining to subject matter without any doubt.

Present Status of the Study

It has been generally agreed that creativity is the most valued human quality. It is considered vital for shaping the man's future. Hardly, there may be anyone to outlook the importance of creativity.

Researchers have shown that children by nature have the innate ability to see new relationships and produce new combinations out of the existing things or their parts. They exhibit this tendency while in interaction with each other whether they are at work or play. This can blossom fully in them if their parents and teachers provide proper guidance and conducive environment to them. But it is distressing that in our schools proper attention is not paid to it.

The teachers encourage students who are intelligent and who can give correct answer to the question. They nearly encourage students who are creative. Our school programme also do not give due place to the educational experience and proper environment which are essential for the development of creative potential. Many factors may be responsible for this handicap. Either our teachers do not have adequate understanding of the creative process and they do not tolerate children who are non conformists.

The Ability for Comprehension of students when evaluated through informal means seem to be very low. The students are hardly exposed to deliberate learning situations that are planned based on activities.

We should promote real Ability for Comprehension among students. Even the classroom practices intended to or particular about finishing the syllabus meaningfully. The reading habits of the students also seem to be decreased and hence the environment develop reading comprehension among students do not seem to be very satisfactory.

Objectives of the Study

1. To study the Ability for Comprehension of Students of Ninth Standard of Mysore Taluk.
2. To study the extent of Creativity of Students of Ninth Standard of Mysore Taluk in terms of Fluency, Flexibility and Originality.
3. To study whether there is any significant relationship between the Ability for Comprehension and Creativity of Students of Ninth Standard in terms of fluency.
4. To study whether there is any significant relationship between the Ability for Comprehension and Creativity of Students of Ninth Standard in terms of flexibility.
5. To study whether there is any significant relationship between the Ability for Comprehension and Creativity of Students of Ninth Standard in terms of originality.

Variables in the Study

1. Ability for Comprehension
2. Creativity
3. Ability for Comprehension: Ability to understand in terms of Vocabulary, Sentence Structure, Paragraph Comprehension and inference.
4. Creativity: It refers to the multi-dimensional attributes (verbal, non-verbal) differentially distributed among the individual involving the abilities of fluency, flexibility and originality.

Sample of the Study

The present study consists of a sample of 400 students studying in standard Ninth of Kannada Medium schools of Mysore taluk out of which 200 were boys and 200 were girls.

The schools of Mysore Taluk were listed on the basis of area and gender. Four schools from each of the four category (Urban, Rural, Boys, Girls) were selected. The students of each schools were listed 100 students of each school were randomly selected (leaving every fifth students). Thus sample of 400 students from four different schools were selected for the study. The following table showing details of the sample.

Locality	Gender	
	Boys	**Girls**
Urban	100	100
Rural	100	100
Total No. of the Population	200	200
	400	

Tools used in the Study

The study consists of two tools. One constructed tool and another standardised tool intending to measure the Ability for Comprehension of Students and Creativity.

1. A test to measure the Ability for Comprehension of Students, prepared by the investigator.
2. A test prepared by Baqer Mehdi to measure the Creativity of Students.

Statistical Techniques of the Study

For the present study, the Investigator used Descriptive Statistics and Inferential Statistics.

1. Descriptive Statistics: In the present study Mean and Standard Deviation were used.

2. Inferential Statistics: In the present study, the Inferential Statistic Spearman's Product Moment Correlation (r) was used.

Analysis and Interpretation of the Data

Analysis and Interpretation of objective One

The first objective was to study the Ability for Comprehension of Ninth Standard Students of Mysore Taluk. The analysis and interpretation of this objective has been done using descriptive statistics namely Mean and Standard Deviation.

Table-1: Showing the Number (N), Mean and Standard Deviation of the scores of Students of Standard Ninth of Mysore Taluk on the ability for comprehension.

Variable	N	Mean	SD
Ability for Comprehension	400	96.09	7.335

From above table, it is observed that the mean obtained from the scores of Students of Standard Nine on the Ability for Comprehension test was 96.09. Since the Mean scores obtained by the students were more than 54.29, it can be considered as high (as defined under chapter 1.5.0).

From the above analysis it can be concluded that, the Ability for Comprehension of Ninth Standard Students is 'high'.

Analysis and Interpretation of Objective Two

The second objective was to study the extent of Creativity of Students of Ninth Standard of Mysore Taluk in terms of fluency, flexibility, originality.

The analysis and interpretation of the objective has been done by using descriptive statistics namely Mean and Standard Deviation.

Table-2: Showing the Number (N) Mean and Standard Deviation of the scores of Students of Standard Nine of Mysore Taluk on Creativity and interrelation to fluency, flexibility and originality.

Variables	N	Mean	SD
Creativity	400	145.15	25.53
Components			
Fluency	400	42.76	11.15
Flexibility	400	34.93	9.88
Originality	400	70.87	13.22

Form the above table, it is observed that the mean obtained from the scores of Students of Standard Nine on Creativity test was 145.15. Since the mean scored obtained by the students falls between 119.47 to 170.53, it can be considered as average (as defined under chapter 1.5.0)

From the above analysis it can be concluded that, the Creativity of Ninth Standard Students is 'average'.

From the above table, it is observed that the mean obtained from the scores of Students of Standard Nine on Creativity test in relation to fluency was 42.76. Since the mean scores obtained by the students falls between 31.61 to 53.91, it can be considered as average (as defined under chapter 1.5.0)

From the above analysis can be concluded that, the Creativity in relation to fluency of Ninth Standard Students is 'average'.

From above tabl, it is observed that the mean obtained from the scores of Students Ninth Standard on Creativity test in relation to flexibility was 34.93. Since the mean more obtained by the students falls between 25.05 to 44.81, it can be considered as 'average' (as defined under chapter 1.5.0).

From the above analysis can be concluded that, the Creativity in relation to flexibility Ninth Standard Students is 'average'.

From the above table, it is observed that the mean obtained from the scores of Students of Ninth Standard on Creativity test in terms of originality was 70.87. Since the mean sore obtained by the students falls between 57.65 to 84.09, it can be considered as 'average (as defined under chapter 1.5.0).

From the above analysis it can be concluded that, the Creativity in terms of originality of Ninth Standard Students is 'average'.

Analysis and Interpretation of Objective Three

The third objective was to find out whether there is any significant relationship between the Ability for Comprehension and Creativity in terms of fluency of Ninth Standard Students of Mysore taluk.

The data related to this objective was analyzed with the help of the product moment correlation.

Table-3: Showing the co-relation co-efficient (r) of scores of Ninth Standard Students on the Ability for Comprehension and Creativity in terms of fluency.

Variables	N	r-value	Significant Level
Ability for Comprehension	400		
Creativity in terms of Fluency	400	0.029	Not Significant at 0.05 level

From the above table-3, it can be observed that the correlation co-efficient (r) of scores of Ability for Comprehension and Creativity in terms fluency on Ninth Standard Students is 0.029 at the degrees of freedom of 398 which is less than table value (r) of 0.98 at 0.05 level.

In the light of this result it could be concluded that there is no significant relationship between the Ability for Comprehension and Creativity in terms of fluency Ninth standard students of Mysore Taluk.

Analysis and Interpretation of Objective Four

The fourth objective was to study whether there is any significant relationship between the Ability for Comprehension and Creativity in terms of flexibility of Ninth Standard Students of Mysore Taluk. The data related to this objective was analyzed with the help of product moment co-relation.

Table-4: Showing the co-relation co-efficient (r) of scores of Ninth Standard Students on Ability for Comprehension and Creativity in terms of flexibility.

Variables	N	r-value	Significant Level
Ability for Comprehension	400		
Creativity in terms of Flexibility	400	-0.185	Significant at 0.05 level

From the above table, it can be observed that the co-relation co-efficient (r) of scores of Ability for Comprehension and Creativity in terms of Flexibility of Ninth Sundard Students is -0.185 at the degrees of freedom of 398 which is more than table value (r) of 0.98 at 0.05 level.

In the light of above analysis it can be concluded that there is a Significant Relationship between the Ability for Comprehension and Creativity in terms of Flexibility of Ninth Standard Students of Mysore Taluk.

However the relationship between the two variables are denoted as negative which means as the value of one variable increases the value of another variable decreases. This implies that those who score more on Creativity in-terms of Flexibility may score less on Ability for Comprehension and vice-versa.

Analysis and Interpretation of Objective Five

The fifth objective was to study whether there is any significant relationship between the Ability for Comprehension and Creativity in terms of Originality of Ninth Standard Students of Mysore Taluk. The data related to this objective was analyzed with the help of the product moment co-relation.

Table-5: Showing the correlation co-efficient (r) of scores of Ninth Standard Students on the Ability for Comprehension and Creativity in terms of Originality.

Variables	N	r-value	Significant Level
Ability for Comprehension	400		
Creativity in terms of Originality	400	-0.241	Significant at 0.05 level

From the above table, it can be observed that the co-relation co-efficient (r) of scores of Ability for Comprehension and Creativity in terms of Originality of Ninth Standard Students is -0.241 at the degrees of freedom of 398. Which is more than table value (r) of 0.98 at 0.05 level.

In light of this result it can be concluded that there is a significant relationship the Ability for Comprehension and Creativity in terms of Originality of Ninth Standard Students of Mysore Taluk.

However there is relationship between the two variables is denoted as negative which as the value of one variable increases the value of another variable decreases. This implies that those who score more on creativity in-terms of originality may score less on Ability for Comprehension and vice-versa.

Major Findings of the Study

1. The Ability for Comprehension of the Students of Standard Nine of Mysore Taluk found to be 'high'.
2. The Creativity of the Students of Standard Nine of Mysore Taluk found to be 'average' in terms of Fluency, Flexibility and Originality.
3. There is no significant relationship between the Ability for Comprehension and Creativity of Ninth Standard Students of Mysore Taluk in relation to fluency.
4. There is a significant but negative relationship between the Ability for Comprehension and Creativity of Ninth Standard Students of Mysore Taluk in relation to flexibility.
5. There is a significant but negative relationship between the Ability for Comprehension and Creativity of Ninth Standard Students of Mysore Taluk in relation to originality.

Educational Implications of the Study

1. Teachers need to give emphasis to all the components of Comprehension while teaching Kannada as the first language.
2. Special attempts need to be made for developing strategies to improve the ability for Comprehension of students.
3. The students should be exposed to more reading Comprehension situation and the teachers should make deliberate attempts to improve the ability for comprehension.
4. It has been found that the ability of student to think creatively is comparatively low. So, the students should be exposed to situations where there is scope for divergent thinking abilities.
5. In school rote learning should be replaced by learning for comprehension of the material read, so that the ability for comprehension keeps developing.
6. The students should be motivated to expose themselves to more situations where there is scope for students to think in divergent way. Eg: Preparation of drama scripts, writing creative stories, poems and other verbal creative situations.

Suggestions for Further Research

1. Studies can be conducted by taking other components of Comprehension Ability in Kannada.
2. Similar studies can be conducted with larger samples for a large population.
3. Studies on Comprehension Ability could be conducted using standardised close procedure.
4. A Comparative Study of Ability for Comprehension and Creativity of Students of different levels namely Primary, Higher Secondary and College levels.
5. Studies may be undertaken to find out the effect of Educational Technology on the improvement of Comprehension Ability.

6. Studies may be undertaken to find out the relationship between reading speed and Comprehension Ability.

Limitations of the Study

1. The present study is restricted only to a sample of four Kannada medium schools where Kannada is taught as first language.
2. The generalisation of the study was limited to only one Taluk of Mysore District.
3. There were no standardised tool available to measure the Ability for Comprehension of high school students. Therefore, the tool had to be constructed by the investigator.
4. The study has taken into consideration only vocabulary, sentence structure, meaning of paragraph, paragraph comprehension and inference as the components of the Ability for Comprehension.

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EFFECTIVENESS OF PSYCHOLOGICAL WELLBEING THROUGH MINDFULNESS EDUCATION: A STUDY AMONG SECONDARY SCHOOL STUDENTS IN BENGALURU CITY

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Abstract

Mindfulness learning has appeared as a capable approach to promote psychological wellbeing among students as well as learning outcome. This research investigates the impact of mindfulness education on students' psychological wellbeing at secondary education level. To examine the effectiveness of mindfulness education in enhancing psychological wellbeing, reducing stress and improving emotional regulation among secondary school students. A sample of 100 students age range between 14 to 16 will participate. Mindfulness Education studied as independent variable, Psychological Wellbeing studied dependent variable along with moderating variables (sex and type of management). The Psychological Well-Being Scale (PWBS) developed by Dr. Devendra Singh Sisodia and Ms. Pooja Choudhary (2012) and the Mindful Attention Awareness Scale (MAAS) developed by Kirk Warren Brown and Richard M. Ryan (2003) will find out the psychological wellbeing and mindfulness education levels. Statistical techniques like Mean, SD, correlation and independent 't' test will include for the proposed study. The result aims to show a positive significant relationship between psychological wellbeing and mindfulness education, showing the important role of mindfulness education in improving psychological wellbeing and academic performance.

Keywords: Mindfulness Education, Psychological Wellbeing, Secondary School Students, Education

1. Introduction

Adolescence is a vital time for development of physical, emotional as well as social factors. Secondary school students, in particular, are under huge pressure to succeed academically, deal with peer interactions and negotiate identity formation. This can lead to increased stress, worry and poor psychological well-being.

Mindfulness education is a latent approach to advance psychological wellness in school children. It entails focusing concentration on the present moment without judgment as well as distraction. Mindfulness helps individuals to build resilience, self awareness as well as emotional regulations.

Recent investigations on psychological well-being as well as mindfulness among teachers as well as students of India. Tripathi & Kumar (2024) studied that government school teachers and pupils had higher psychological well-being than their students from private institutions. Borah & Nisanth (2024) examined that secondary children had average levels of psychological well-being along with substantial gender variations. Khatri et al. (2022) conducted examination as a correlation study on awareness about mindful attention and peace of mind in younger people and discovered a favourable relationship. Kamala (2022) examined the relationship between psychological well-being with academic performance among secondary school students and concluded insignificant gender variations. Korah & Rema (2021) found positively significant relationship between mindfulness attentive awareness with psychological well-being among children. Bhat (2021) examined insignificant differences in psychological well-being of both boys and girls of senior secondary schools as well as between average and poor academic performers.

Previous research has also examined psychological well-being of teachers. Kumari and Jyoti (2020) observed substantial variations in well-being among government and private teachers at secondary schools of Haryana, while Rohit (2018) also discovered insignificant variations in psychological well-being between males and girls in secondary schools. Brown & Ryan (2003) examined that mindfulness increases self-regulation along with good emotional states. According to his research, mindfulness-based programme improves mental health of adolescents with academic achievement as well as social interactions. However, there is a lack of investigations on the effectiveness of mindfulness education in Indian context, particularly among students at secondary schools in Bengaluru City. This research aims to contribute to the growth of evidence-based conducts to augment the mental health and wellbeing of school going children in Indian educational settings by investigating the relationship between mindfulness education as well as psychological wellness.

2. Need for the Study

This research contributes to the development of effective mindfulness based therapies in educational settings, which advance the health with resilience of secondary school students (Holzel et al., 2011). This study, which examines the impact of mindfulness education on psychological well-being, conveys educators as well as policymakers about ways for promoting mental health with reducing academic stress among school going students. The study's conclusion helps teacher training programmes incorporate mindfulness education, resulting in supportive learning settings that promote emotional intelligence as well as social skills (Zins et al., 2004).

4. Statement of the Problem

The current investigation's research problem is titled is as follows:

"Effectiveness of Psychological Well-being through Mindfulness Education: A Study among Secondary School Students in Bengaluru City."

5. Objectives

The investigation's aims are as follows:

1. To investigate the relationship between Psychological Wellbeing and Mindfulness of secondary school students.
2. To assess the differences in the Psychological Wellbeing of secondary school students having different levels mindfulness.
3. To examine the differences in the Psychological Wellbeing of secondary school students with regard to gender as well as type of management.

6. Research Hypotheses

The following are the research hypotheses for the current study.

1. There is no significant relationship between Psychological Wellbeing and Mindfulness of secondary school students.
2. There is no significant difference in the Psychological Wellbeing of secondary school students having low and moderate levels of mindfulness education.
3. There is no significant difference in the Psychological Wellbeing of secondary school students having moderate and high levels of mindfulness education.
4. There is no significant difference in the Psychological Wellbeing of secondary school students having low and high levels of mindfulness education.

5. There is no significant difference in the Psychological Wellbeing of secondary school boys and girls.
6. There is no significant difference in the Psychological Wellbeing of secondary school students studying in government and private aided schools.
7. There is no significant difference in the Psychological Wellbeing of secondary school students studying in private aided and private unaided schools.
8. There is no significant difference in the Psychological Wellbeing of secondary school students studying in government and private unaided schools.

7. Method Used

Population:

The population is consists of secondary school going students educating in schools situated at Bengaluru City, Karnataka in India.

Sample Size:

A sample of 100 students between the age group of 14 to 16 years studying in varied type of schools would be drawn by using stratified random sampling technique. Data representation would be given to boys and girls. The sample of 100 secondary school students was administered with the research questionnaire for obtaining data for the present study.

Tools used for the Study:

The Psychological Well-Being Scale (PWBS) developed by Dr. Devendra Singh Sisodia and Ms. Pooja Choudhary (2012) was used to find out the psychological wellbeing and Mindful Attention Awareness Scale (MAAS) developed by Kirk Warren Brown and Richard M. Ryan (2003) was used for assess the mindfulness education levels along with Personal Proforma.

8. Analysis and Interpretation of Data

Table-1: showing mean, std. dev. 'r' value and significance level on scores of Psychological Wellbeing and Mindfulness perceived by secondary school students.

Variables	Mean	Standard Deviation	Obtained 'r' value	Level. of Sig.
Psychological Wellbeing	207.850	14.004	0.499	*
Mindfulness Education	52.760	11.861		

Significant at 0.05 level (0.195)

Table-1 shows descriptive statistics and a correlational analysis for secondary school students' psychological well-being as well as mindfulness. The mean scores for psychological well-being are 207.850, with a standard deviation value of 14.004 and the mean scores for mindfulness are 52.760, with a standard deviation values of 11.861. The obtained 'r' value that is 0.499 shows a positive relationship between psychological well-being as well as mindfulness. This relationship is statistically significant at the 0.05 level, along with the 'r' value exceeding the critical value of 0.195 at 0.05 level. Thus, the findings confirms that higher levels of mindfulness are linked to improved psychological wellbeing of school going students.

Table-2: Independent 't' test results with regard to Psychological Wellbeing scores of secondary school students with regard to mindfulness levels.

Mindfulness Levels	Sample No.	Mean	Std. Deviation	' t ' Value	Sig. level
Low	10	194.300	9.944	4.09	*
Moderate	83	208.578	13.730		
Moderate	83	208.578	13.730	2.96	*
High	7	218.571	7.976		
Low	10	194.300	9.944	5.57	*
High	7	218.571	7.976		

Significant at 0.05 level ('t' Table Value for N=93/90/17; df=91/88/15 is 1.99 / 2.13).

Table-2 shows the results of an independent 't' test that examined the differences in Psychological Well-being ratings among secondary school going students depending on their mindfulness levels (Low, Moderate and High levels). Students with low mindfulness level (n=10) have a mean scores of 194.300 and with a standard deviation value of 9.944, whereas those with moderate mindfulness levels (n=83) have a mean score of 208.578 and a standard deviation value of 13.730. The comparison of these said two groups provides significant 't' value that is 4.09, suggesting a 0.05 level of statistical difference.

Furthermore, students with high mindfulness (n=7) have a higher mean scores of 218.571 and standard deviation value of 7.976, when contrasted to the low mindfulness group, the 't' value of 5.57, which is equally significant at 0.05 level indicating a more difference exists. Furthermore, the comparison of the moderate and high leveled groups yields a 't' value that is 2.96, which is statistically significant at the 0.05 level of confidence. These results confirms that students with higher degrees of mindfulness had significantly better psychological well-being than those with lower mindfulness levels. Figure-1 depicts the same information graphically also.
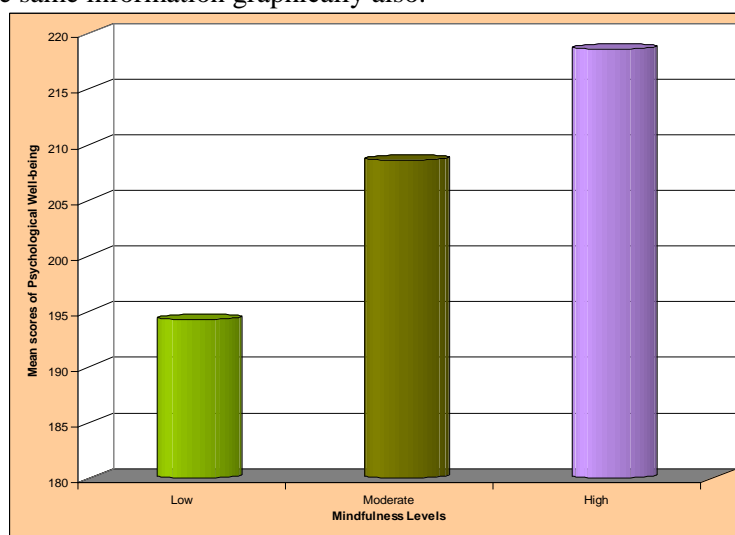
Fig 1: Comparison of mean psychological wellbeing scores between secondary school students' different mindfulness levels.

Table-3: Independent 't' test results with regard to Psychological Wellbeing scores of secondary school students with regard to gender.

Gender	Sample No.	Mean	Std. Deviation	't' Value	Sig. level
Boys	50	204.920	13.903	2.13	*
Girls	50	210.780	13.617		

Significant at 0.05 level ('t' Table Value for N=100; df=98 is 1.98).

Table-3 explains the results of an independent 't' test comparing Psychological Wellbeing ratings in boys as well as girls educating as secondary school children. The mean scores for boys (n=50) are 204.920, with a standard deviation value of 13.903, whereas the mean scores for girls (n=50) are higher at 210.780, with a standard deviation value of 13.617. The calculated 't' value that is 2.13 is greater than the critical value of 1.98, implying that the difference exists Psychological Wellbeing scores of school going boys and girls is statistically significant at the 0.05 confidence level. This confirms that, on mean values, girls had much higher psychological well-being than school boys. Figure-2 depicts the same information graphically also.
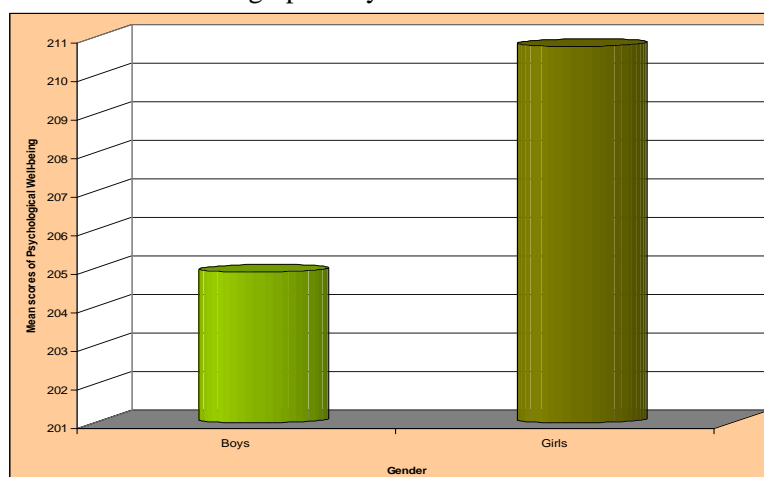
Fig 2: Comparison of mean psychological wellbeing scores between secondary school students with regard to gender.

Table-4: Independent 't' test results with regard to Psychological Wellbeing scores of secondary school students educating in varied type of school management.

Type of Management	Sample No.	Mean	Std. Deviation	't' Value	Sig. level
Government	33	203.939	15.692	1.01	NS
Private Aided	33	207.848	15.602		
Private Aided	33	207.848	15.602	1.21	NS
Private Unaided	34	211.647	9.131		
Government	33	203.939	15.692	2.45	*
Private Unaided	34	211.647	9.131		

Significant at 0.05 level; NSNot Significant ('t' Table Value for N=66/67; df=64/65 is 2.00).

Table-4 confirms the independent 't' test conclusion contrasting secondary school students' Psychological Wellbeing scores based on type of school management that is Government, Private Aided and Private Unaided schools.

The mean scores for government school going students (n=33) are 203.939 with a standard deviation value of 15.692, but students from private aided schools (n=33) have a mean scores of 207.848 with a standard deviation value of 15.602. The 't' value that is 1.01 between these two groups are insignificant, confirming that there is no statistically significant difference exists in Psychological Wellbeing between Government as well as Private Aided school going children.

However, when contrasting Government school students to Private Unaided school going students (n=34), with a mean scores of 211.647 and a standard deviation value of 9.131, the 't' value that is 2.45, which is significant at the 0.05 confidence level. This confirms that children educating in private unaided schools had much greater levels of psychological well-being than students educating in government schools. The comparison of Private Aided as well as Private Unaided schools results in a 't' value that is 1.21, which is not statistically significant also, indicating insignificant difference between these two groups. Figure-3 depicts the same information graphically also.
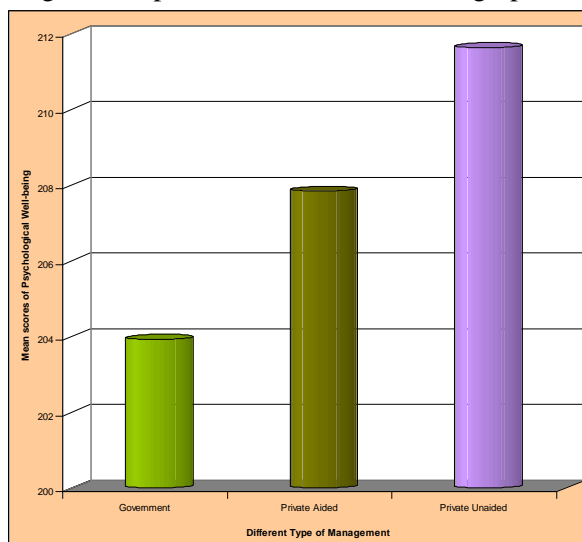
Fig-3: Comparison of mean psychological wellbeing scores related to secondary school students educating in varied type of school management.

9. Results

1. There exists significant and positive relationship between Psychological Wellbeing and Mindfulness Education of secondary school students.
2. There exist significant difference in the Psychological Wellbeing of secondary school students having low and moderate levels; moderate and high levels; and also low and high levels of mindfulness.
3. There exist significant difference in the Psychological Wellbeing of secondary school boys and girls.
4. There was no significant difference in the Psychological Wellbeing of secondary school students studying in government and private aided schools.

5. There was no significant difference in the Psychological Wellbeing of secondary school students studying in private aided and private unaided schools.

6. There was a significant difference in the Psychological Wellbeing of secondary school students studying in government and private unaided schools.

Conclusion and Implications

The present research found a substantial positive relationship between psychological wellbeing as well as mindfulness education of secondary school students, implying that more mindfulness is related with better psychological well-being. Significant variations in Psychological Well-being were found based on the level of mindfulness, with students with greater levels exhibiting higher wellbeing than those with lower levels of mindfulness. Gender differences were also substantial, with school going girls reporting higher levels of psychological well-being than school going boys. However, there were no significant variations in welfare across management types (government, private-aided, private-unaided), with the exception of a substantial variation between children in government as well as private unaided schools.

These results also imply that introducing mindfulness education into school curriculum improve students' psychological well-being and gender disparities should be addressed along with activities that promote the well-being of boys. The lack of substantial differences between school types suggests that individual as well as internal characteristics such as mindfulness have a greater influence on well-being than external factors namely school type. Schools, regardless of their management style, can benefit from implementing programs that promote mindfulness and psychological support.

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A META-ANALYSIS ON THE EFFECT OF TEST ANXIETY ON THE ACADEEMIC ACHIEVEMENT

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Abstract

Education is more concerned with academic achievement of students. Academic achievement refers to the extent or degree of mastery in certain areas of studies. Academic achievement refers to the knowledge accomplished or attained and skills developed by him/her in the school subjects, usually designed test scores or by marks assigned by teachers. It means the achievement of the students in the academic subjects such as languages, social science, general science, arithmetic etc. Academic achievement is a key mechanism through which adolescents learn about their talents, abilities and competencies which are an important part of developing career aspirations (Lent et al., 2000). There are various factors that affect the achievement of the students one such factor is the academic anxiety of the students.

Several studies have been conducted with respect to the effect of test anxiety on the academic achievement. The researcher has included the studies conducted from 2012 to till date. (2024) the studies showed that the test anxiety shows a negative impact on the academic achievement of the students.

Academic anxiety is one of the factors that affect academic achievement of students

The main purpose of this study is to conduct a meta-analysis to provide quantitative analysis of the research. The research findings shows that Academic anxiety is one of the factors that affect academic achievement of students.

Introduction:

Back ground of the study

Anxiety has been the primary variable of interest in understanding the role of emotion with performance, and is typically characterized by feelings of tension, worried thoughts, and negative physiological reactions (APA, 2013). Consistently, anxiety problems are reported to be one of the most widespread mental health problems in children, with prevalence upwards of 41% (Cartwright-Hatton et al., 2006). Heightened levels of anxiety are often manifested when individuals encounter environments and scenarios that may provoke feelings of fear or worry, such as a situation where an individual's abilities are being tested. When faced with an assessment of ability, there is often an implicit concern of negative consequences based upon test performance. Test anxiety, exam stress, or test stress are often synonymous with the fear or worry of negative evaluation that results in a negative behavioural, physiological, or emotional responses (Zeidner, 1998).

Within educational settings, test anxiety is one form of "academic anxiety" (Cassady, 2010) that is characterized by (1) context specific stimuli (e.g., classroom instruction) and (2) academic subject specific reactions (e.g., math anxiety; Hembree, 1990). Test anxiety is differentiated from other forms of anxiety through its focus on evaluative (i.e., testing) situations. Test anxiety has also been referred to as exam anxiety, exam stress or test stress. Recent estimates have suggested that between 15% and 22% of students exhibit high levels of test anxiety (Putwain and Daly, 2014; Thomas et al., 2017). Much research has demonstrated a relationship between test anxiety and a host of negative variables including increased risk for subsequent anxiety and depression (Leadbeater et al., 2012), poor class grades (Chapell et al., 2005, Segool et al., 2013), difficulties engaging in instructional content (Bedell and Marlowe, 1995), and low test performance (Putwain, 2008, von der Embse and Witmer, 2014). Given

these outcomes, research has produced a variety of evidence-based interventions to mitigate test anxiety (Ergene, 2003, von der Embse et al., 2013a, von der Embse et al., 2013b). However, to continue advancing evidence-based treatment of test anxiety, it is necessary to better understand (1) the changing nature of the construct, (2) the evolution and improvement in test anxiety measurement, and (3) the relationship of test anxiety with performance as well as important demographic differences.

Purpose of the present study

Given the change in the understanding and measurement of test anxiety over the years, there is a need to examine the potential related changes that effect the performance of the students. One such factor considered here is test anxiety. The purpose of the present meta-analysis is analyse the impact of test anxiety on academic performance of the students.

Objective of the study

The present study examined the influence of test anxiety on a variety of educational outcomes, in particular to academic performance.

Variables of the study

Researcher examined studies and observed that test anxiety is as identified as dependent variables and in some other studies, the same variable is identified as Independent variables. For the purpose of this study, studies with test anxiety is identified as independent variables and academic achievement as a dependent variable are taken into consideration.

Design and methods

Results of 20 studies from 2012 to 2024 to the present, were synthesized via a meta-analytic framework to explicate predictors, correlates, and relationships with the test anxiety construct.

Inclusion and Exclusion Criteria

For the descriptive synthesis and quantitative meta-analysis, the researcher included studies that met the following criteria:

- Published in a peer-reviewed journal or an unpublished dissertation printed in English.
- Employed an experimental or quasi-experimental design with a treatment and a comparison to determine the experimental effect
- Students studying in primary, secondary school, college and university
- Examined the influence of test anxiety on academic achievement.
- Assessed both academic achievement outcomes and academic anxiety outcomes.

Analysis and Research findings of the study.

Description of Selected Studies: Twenty studies met the criteria for inclusion in this Meta-analysis. Of the 20 studies, 2012-2024, 80% of the studies were published during the period 2012-2019. 35% of the studies were published in Journals and 65% of the studies were conducted for the doctoral research, finally 20 studies were taken into consideration.

Summary of the research conducted:

Sl.No.	Year	Author	Result
1	2012	Matthew Owens, Jim Stevenson and Julie A. Hadwin University of Southampton, UK Roger Norgate	The results indicated that higher level of anxiety was associated with lower academic performance. Lower academic achievement was caused due to more worry about tests & both anxiety & depression were significantly related to lower performance.
2	2012	Nicholas Cale, Chirstopher Fowler and Meelisa Remfer	The findings of the study showed that There is negative co-relation among the students with respect to academic achievement and test anxiety. The boys are less anxious compared to girls. Girls performed less compared boys.
3	2013	Von der Embse, Nathaniel Barterin, Justin Segol, Natasha	Students possessing low test anxiety performed better in exams than Students with high test anxiety, the study indicated that, techniques like cognitive behavioural therapy, biofeedback and primary competency mixed approaches, can be used to eliminate test anxiety among students.
4	2013	Ajay Kumar Attri and Vijaykumar Atti	The findings revealed that, girls were more proven to be academic anxiety and performed better in Academic 5performance than boys and their existed significant difference in academic achievement and academic anxiety of male and female secondary school students.
5	2014	RayHembree	The results indicated that, students had poor performance due to high test anxiety and it also affected on students self esteem and caused feel of negative evaluation and other forms of anxiety. Test anxiety also varied due to variation in their gender, ability and also grade level.
6	2014	Mohammad Nadeem, Akhtar Ali, Saira Maqbool and Syeda Uzma Zaidi	The findings of the study are a) There was significant influence of anxiety on academic achievement of students. b)Both male and female students showed decrease in academic achievement due to increasing anxiety levels but females were prove to be more anxiety than male students.

7	2013	Bharati Roy	The result indicated that, their exist significant difference in the level of test anxiety of students. Female indicated high level of test anxiety, where as males showed high percent of moderate level of test anxiety.
8	2014	Revina An mary, Gregory Marslin, Gregory Franklin and Caroline J.sheeba	The result showed that, Board exam students before going to exam had high level of anxiety. Boys had higher anxiety than girls and both boys and girls of 12 th standard had high test anxiety before Board exam. Students from nuclear families showed more test anxiety level than other groups. This was investigated by the examiner by using analysis of variance.
9	2015	Stephen Antwi-Danso, Emmanuel Amissah and Paul Kobina Effrim	Findings revealed a moderate level of students' test anxiety. Comparatively, female students reported higher levels of test anxiety than male students. Similarly, the performance of male test anxious students overwhelmed the performance of their test anxious female counterparts.
10	2015	Begum Sehnaz	The findings revealed that the test anxiety has a significant impact on the test performance of the students and positively co-related.
11	2016	Nathaniel von der Embse a, Dane Jester b, Devlina Roy b, James Post	The findings revealed that the test anxiety has a significant impact on the test performance of the students.
12	2016	Okogu J. O., Osah Mark and Umudjere, S.	The results of the study shown that the examination anxiety contributed negatively for the performance of the students.
13	2018	AvineetaSikidar and Dr. Sima Pal	The findings revealed that there is a significant influence on the academic achievement of boys and girls due to academic anxiety.
14	2018	Farrahdilla Hamzah, Khairi Che Mat, Vidya Bhagat, NurSyakilah Mahyiddin	:The study results revealed that only 1.7% respondents no anxiety, 36.7% respondents experienced of mild anxiety, more than half 58.3% respondents had moderate anxiety and 3.3% respondents experienced of severe anxiety on their academic performance.

15	2019	Hasan Yusefzadeh,[1] Jamileh AmirzadehIranagh,[2] and Bahram Nabilou[3]	There is a significant impact of test anxiety on the academic performance of the university students.
16	2021	Shafiq ur Rehman*, Erum Javed** and Muhammad Abiodullah **	The findings of the study indicate a negative relationship between test anxiety and academic achievement. Results showed that girls have higher test anxiety scores as compared to boys.
17	2022	Hamza Alkowatli, Shariq Khan*, Yusuf Bhyat, Mahra Abdullah, Moza Alsuwaidi	Overall out of the 614 participants in the research, 82.6% of the students have test anxiety and 17.4% do not have test anxiety. The difference in self-esteem is significant with increase in age. More students who are over the age of 20 have a higher level of test anxiety compared to those under the age of 20 (88.6% and 11.4% respectively)
18	2022	John Jerrim	The study reveals that the academic performance is lowed because of text anxiety in girls than boys.
19	2023	Ghizlane Merzaq1,□,Rachid El Ouardi 2,Smail Alaoui 3, Abdelaziz Lahmar4, AkramAbdullah Nasher Aladwir5, Benaissa Zarhbouch	The results of this study confirmed a statistically significant correlation between test anxiety and academic achievement, with statistically significant differences at the level of test anxiety due to the gender variable, with no differences recorded at the level of academic achievement, and the absence of differences at the level of test anxiety and the level of academic achievement.
20	2024	SreeRam Thiriveedhi,1 Achyuth Myla,2 CV Priya,1 Keerthana Vuppuluri,corresponding author1 Phanindra Dulipala,1 and Vijaya Krishna Prasad Vudathaneni3	The results of the study that the majority of the students faced difficulties in their academic performance due to test anxiety, and the effects were prominent irrespective of the age and gender of the students.

Results of the study

The above analysis revealed that test anxiety had an significant impact on the academic performance at various levels. The other factors also have impact on the academic performance such motivation, parental involvement. Etc.

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A STUDY ON SELF-CONCEPT OF CHILDREN WITH SPECIAL NEEDS IN RELATION TO ACADEMIC ACHIEVEMENT AT SECONDARY LEVEL

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Abstract

The present study attempted to investigate the predictive correlates of academic achievement of secondary school special needs students. To attain this academic achievement was considered as the criterion variable, independent variables such as self-concept and a few background variables such as Gender, type of school management, and locality were selected. The study was constituted with a Purposive sampling technique of special needs students drawn from various secondary schools of Dakshina Kannada district (Urban and Rural) recognized by the State Government of Karnataka representing types of management (aided and government) giving representation to locality (rural and urban) and Gender (male and female). For the present study the 't' test, was applied to achieve the objectives. Data was collected by a standardized self-concept tool self-constructed Academic Achievement tool and Collected data analysed with the help of SPSS package. The findings of the study show that Positive high degree correlation exists between Academic Achievement and Self-Concept among Secondary School Children with special needs it can be concluded that the students with good self-concept do possess better Academic Achievement. Self-concept between government and aided schools". It is inferred that, there is no difference in Self-concept among types of school management Children with Special Needs. It is inferred that there is no difference in Self-Concept between rural and urban Secondary School Children with Special Needs. Self-concept between male and female schools". It is inferred that there is no difference in Self-Concept between male and female Secondary School Children with Special Needs.

Keywords: *Self-Concept, Children with special needs, Academic Achievement, secondary school students, secondary level.*

Interduction

Self-Concept:

MEANING:

Self-concept as a self-descriptive behaviour that is observable, measurable, and situation-specific. Two (perceptual and operational) models have dominated the debate on the construct of self-concept, and a logical extension of both is that self-concept can be operationally enhanced. The self-concept of young childrenwith special needs and delineates operational self-concept enhancement strategies thatschool and clinic personnel will find helpful in planning interventions for them.

Self-concept is how one can perceive their behaviour, abilities, and unique characteristics.For example, beliefs such as "I am a good friend" or "I am a kind person" are part of an overall self-concept. "self-concept is a collection of beliefs one holds about oneself and the responses of others. It embodies the answer to the question, "Who am I?. Self-concept is an overarching idea about who we are physically, emotionally, socially, spiritually, and in terms of any other factors that make up who we are ?.

DEFINITIONS OF SELF-CONCEPT:

Roy Baumeister (1999) defines "the individual's beliefs about himself or herself, including the person's attributes and who and what the self is".

Rosenberg's (1979) self-concept is "the totality of an individual's thoughts andfeelings having reference to him/her as an object".

Components of Self-Concept:

1. Self-Image:

It's how we see ourselves. Our self-image is a combination of different attributes.

- personality traits (for example, introverted kind).
- social roles (for example, friends, students).
- What one know about themselves physically (for example, tall, short hair).

2. Self-Esteem:

Self-esteem is the value that we place on ourselves. Our self-esteem often depends on how we evaluate ourselves. In other words, we make personal comparisons andvalidate how others respond to us. For example, when our managers respond favourably to our achievements, we are encouraged by our performance and our self- esteem grows.

3. Ideal Self:

This is centred on how we wish we could be. For example, if our goal is to lead a large team someday, we create an ideal self and make a checklist of goals we want to work towards. All our efforts may be directed towards achieving that ideal version of ourselves.

Children with Special Needs:

Meaning:

Children with special needs are referred to as children who have special needs. In order to help such children, CWSN is a varied group that includes those who have behavioral issues, learning difficulties, intellectual disabilities, sensory processing issues, and physical disabilities including ‗exceptional children', "handicapped children" and "children with special educational needs". These children are recognised as having mental, emotional, physical, or social needs which, following a diagnosis may require therapeutic intervention or special care by qualified specialists. The children with special needs need extra assistance in the classroom because of their physical, cognitive, emotional, or developmental difficulties.

Objectives of the Study

1. To find out the relationship between self concept and academic achievement of Secondary School Children with Special Needs

2. To investigate the difference in the mean scores of self concept among Secondary School children with Special Needs concerning Gender.

3. To investigate the difference in the mean scores of self concept among Secondary School children with Special Needs concerning Locality.

4. To investigate the difference in the mean scores of self concept among Secondary School children with Special Needs concerning Management type.

5. To investigate the difference in the mean scores of Academic Achievement among Secondary School children with Special Needs concerning Gender.

6. To investigate the difference in the mean scores of Academic Achievement among Secondary School children with Special Needs concerning Locality.

7. To investigate the difference in the mean scores of Academic Achievement among Secondary School children with Special Needs concerning Management type

Hypotheses

1. There exists no relationship between self concept and academic achievement of Secondary School Children with Special Needs

2.There exists no difference in the mean scores of self concept among Secondary School children with Special Needs concerning Gender.

3. There exists no difference in the mean scores of self concept among Secondary School children with Special Needs concerning Locality.

4.There exists no difference in the mean scores of self concept among Secondary School children with Special Needs concerning Management type.

5. There exists no difference in the mean scores of Academic Achievement among Secondary School children with Special Needs concerning Gender.

6. There exists no difference in the mean scores of Academic Achievement among Secondary School children with Special Needs concerning Locality.

7.There exists no difference in the mean scores of Academic Achievement among Secondary School children with Special Needs concerning Management type

Variables:

Independent variable: Self-concept

Dependant variable: Academic Achievement

Methodology

For the present study is quantitative research by using survey technique to collect the data. Purposive sampling technique is used comprised with 160, 9th standard children with special needs from schools in Dakshina Kannada District. Dr. Raj kumar Saraswat's (2005) Self-concept tool was used for the data collection, the academic achievement tool was constructed by investigator.

Analysis

H01: There is no significant relationship with Academic Achievement & Self-Concept of Secondary School Children with Special Needs.Karl Pearson's correlation coefficient technique has been used to asses this claim, andthe findings are indicated in the accompanying table.

Table 1: Secondary School Children with Special Need Academic Achievement and Self-Concept Correlation Coefficient.

		Self-Concept
Academic Achievement	**Pearson Correlation**	**. 717****
	Sig. (2-tailed)	**.000**
**Correlation is significant at the 0.01 level (2-tailed). (N)=160		

Table 1 above that the generated r-value was 0.717, which at a significance level of 0.01 is statistically significant. There is a substantial association between Academic Achievement and Self-Concept among Secondary School Special Needs Students, thus reject the null hypothesis and develop the alternative hypothesis.It denotes that among secondary school students with special needs, there is a positive high degree link between academic achievement and self-concept. Furthermore, it was found that students with positive self-concept perform better academically.

H02: There is no a significant difference in the mean scores of Self-conceptwith secondary school children with special needs concerning Gender.

Table 2: Mean, SD and t-value of Self-concept with Secondary School Children with Special Needs with respect to Gender.

	Gender	N	M	SD	t	Sig.
Self-Concept						
	Male	8 6	163.23 26	29.097 27	1.16 0	**Not Sig at 0.05 level**
	Female	7 4	168.82 43	31.869 75		

With 158 degrees of freedom and a 0.05 level of significance, the calculated t-value of 1.160 is smaller than the theoretical table value of 1.96 from table **2**. So, it is agreed that "there is no significant difference in the mean scores on students' self- concept between male and female schools," It is implied that male and female secondary school students with special needs have the same self-concept.

H03: There is no a significant difference in the mean scores of Self-concept with secondary school children with special needs concerning the Management type.

Table 3: Mean, SD and t-value of Self-concept with secondary school children with special needs with respect to the Management type.

	Type of School	N	M	SD	t	Sig.
Self-concept	**Government**	81	164.2469	30.58943	0.660	**Not Signnt at 0.05 level**
	Aided	79	167.4304	30.40145		

With 158 degrees of freedom and a 0.05 level of significance, the evaluated t-value of 0.660 is smaller than the theoretical table value of 1.96 from table 3 above. Thus, itis agreed that "there is no significant difference in the mean scores on students' Self- concept between government and aided schools,". It is implied that children with special needs who receive government assistance and those who do not have any differences in their self-concept.

H04: There is no a significant difference in the mean scores of Self-conceptwith secondary school children with special needs concerning Locality.

Table 4: Mean, SD and t-value of Self-concept with secondary school children with special needs with respect to the Locality.

	Locality	N	M	SD	t	Sig.
Self-Concept						
	Rural	100	165.5800	30.04851	0.128	**Not Sig at 0.05 level**
	Urban	60	166.2167	31.34017		

With 158 degrees of freedom and a 0.05 level of significance, the evaluated t-value of 0.410 is smaller than the theoretical table value of 1.96 from table 4. So, it isagreed that "there is no significant difference in the mean scores on students' self- concept between rural and urban schools,". Rural and urban secondary school students with special needs are acknowledged to have the equal self-concept.

H05: There is no significant difference in the Mean scores of Academic Achievement with Secondary School Children with Special Needs concerning Gender.

Table 5: Summary table of t-test of M scores of Academic Achievement with Secondary School Children with Special Needs concerning Gender.

	Gender	N	M	SD	t	Sig.
Academic Achievement	**Male**	**86**	**27.3023**	**10.06107**	**0.563**	**Not Significant at 0.05 level**
	Female	**74**	**28.1892**	**9.82125**		

With 158 degrees of freedom and a 0.05 level of significance, the calculated t-value of

0.563 is less than the theoretical table value of 1.96 from the table. Thus, it isacknowledged that there is no discernible difference between the mean academic

H06: There is no significant difference in the mean scores of Academic Achievement with secondary School children with Special Needs Concerning the Management type.

Table 6: Summary table of t-test of Academic Achievement among Secondary School children with Special Needs concerning the Management type.

	Type of Management	N	M	SD	t	Sig.
Academic Achievement	**Government**	**81**	**26.7407**	**9.68991**	**1.255**	**Not Significant at 0.05 level**
	Aided	**79**	**28.7089**	**10.13391**		

It can be seen from table 6 that the actual t-value, which was achieved, is 1.255, which is lower than the theoretical value of 1.96 with 158 degrees of freedomat a 0.05 level of significance. Thus, it is accepted that "There is no significant difference in the mean scores on students' Academic Achievement betweenGovernment and Aided schools,". It is understood that there is no distinction in academic achievement between secondary school students with special needs who receive government assistance and those who do not.

H07: There is no significant difference in the mean scores of Academic Achievement with secondary School children with special needs concerning Locality.

Table 8: Mean, SD and t-value t-test of M scores of Academic Achievement with Secondary School Children with Special Needs concerning Locality.

	Locality	N	M	SD	t	Sig.
Academic Achievement	**Rural**	**100**	**28.2300**	**9.47709**	**0.825**	**Not Significant at 0.05 level**
	Urban	**60**	**26.8500**	**10.66727**		

It can be seen from table 8 that the actual t-value, which is smaller than the theoretical value of 1.96 with 158 degrees of freedom and a 0.05 level of significance,is 0.825. Thus, it is believed that there is no discernible difference between rural and urban schools in terms of the mean scores on students' academic achievement. It is said that there is no difference in academic achievement between special needs pupils in rural and urban High Schools.

Educational Implications

- Teachers and parents should make children with special need to look at their inner selves, their belief systems, and daily thoughts. Realize their "real" self which is vastly different from "ideal" self, teach them invest time and effort to address the difference. Set their goal realisticexpectations.
- Teach them how body and mind are interconnected. Train them to redirect their self-concept through their physical movements. For example, walk confidently to feel confident.
- Lifestyles and habits impact the self-concept to a large extent. It's one of the factors that determine how they may reach their ideal selves. For example, make them habit to sleep on time and wake up on time to remain productive throughout the day.
- Teach them interact as normal children with peers, community.
- Develop their Emotional Intelligence, self efficacy, social skills, self confidence, social competencies, communication skills, co-curricular skills.
- Teach them solve the problems by their own.

Conclusion

Self-concept is distinguishable from self-awareness, which refers to the extent towhich knowledge is defined, consistent, and currently applicable to one's attitudes and dispositions. Self-concept also differs from self-esteem. Self- concept is a cognitive component of one's self, while self-esteem is evaluative and opinionated. A person's self-schemas make up their self-concept, which interacts with their social self, self-knowledge, and self-esteem to create their overall sense of self. Itincludes the past, present, and future selves, where future selves represent individuals' ideas of what they might become, what they would like to become, or what they are afraid of becoming. It is possible that they will act as incentives for certain behaviours.

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SOCIAL EMOTIONAL LEARNING IN THE CURRICULUM - A WAY FOR HOLISTIC DEVELOPMENT OF A STUDENT

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Abstract

A person will typically possess both intellectual and emotional intelligence, however the majority of people are only aware of intellectual intelligence as determined by an IQ test. Emotional intelligence is just as important as intellectual intelligence in order to fully experience success. Being emotionally intelligent makes it easier to comprehend, control, and react to one's own and other people's emotions and feelings. Nowadays, intellectual intelligence is valued more and also various techniques of developing it. Only intellectual intelligence will not be enough to complete us. Therefore, developing emotional intelligence in addition to intellectual intelligence is necessary. For some works to be successful, 80 percent emotional intelligence may be necessary.

Social Emotional Learning is an approach where one's development as a whole can be expected. The contents of Social Emotional Learning are inbuilt with every normal human being,but evolution within him has hindered by today's way of life. The only thing left now is compulsory inclusion of Social Emotional Learning components in the curriculum of various stages of education. The efforts should come from various sectors for the overall development of a future generation and thereby sustainable development can be achieved.

Key Words: *Social Emotional Learning, overall development, curriculum, sustainable development*

Introduction:

In any curriculum, comprehensive and evidence based programs to produce social, emotional and academic excellence in students is the first and foremost, which is the base of Social Emotional Learning.

Social Emotional Learning is an integral part of education for human development,where the knowledge, skills and attitudes are used not only for intellectual development, but also in response to social and emotional feelings and thereby establishing healthy relationships.

Social Emotional Learning can be achieved with the efforts of all the stakeholders of the society, either directly or indirectly for sustainable development by the future generations also.

Review of Literature

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- Kim, E. K., Allen, J. P., & Jimerson, S. R. (2024)."Social-emotional skills, such as empathy, self-awareness, and responsible decision-making, are crucial for long-term academic and personal success."
- Kothari, Shruthi; Wesley, Mareena Susan (2020)."Adolescents face a variety of challenges, some of which include social, emotional, cognitive, and interpersonal. In order to help them with their emotions, adolescents should be taught a variety of skills to regulate and handle emotions better."
- Shroff, C. (2023).The National Education Policy 2020 (NEP 2020) underscores the importance of SEL to ensure holistic development of children and states that the education system must

aim to "develop good human beings capable of rational thought and action, possessing compassion and empathy".

Research Gap:

Technology is taking the lead in all phases and situations of human life nowadays. Each and every thing is visioned through the lens of technology, where the feelings and response to emotions have reached to least importance. If it goes like this, still ahead, future generations of human beings will be substituted for robots. So Social Emotional Learning is the concept with the new designs ,and should be the need in every curriculum, in every phase of education with the active involvement of stakeholders of society. Efforts and research have taken place , but still there are ample opportunities to develop the right strategies to implement Social and Emotional Learning components successfully in the curriculum of the students.

Statement of the Problem

Education is the base for any phases of development in any country. But the matter to think about is quality, Social and emotional in education, which is the urgent need for retention of future generations to create a peaceful society and connectedness with each other.

So in this sense , efforts to find the ways to achieve Social Emotional Learning, to some extent , this study has been undertaken. The point , can be used to highlight in this research is the identification of the importance of Social Emotional Learning along with the Academic and Ways to achieve this.

Scope of the study

The research outcomes can be applied to the sector of education and the students are the starting as well as the ultimate beneficiaries of this. Student community are the stakeholders of any society with major holdings, if strong both physically and emotionally, can lead any nation to the highest. Education and Well educated students are the two pillars of this Study and their wellbeing and peacefulness concentrated in the present study.

Hypothesis of the study

● Social Emotional Learning will bring changes in the mindset of a student.
● There is significant difference between a person's acceptance of a thing of think before and after the knowing the Social Emotional Learning

Objectives of the study:

● To know the concept of Social Emotional Learning.
● To know the need of Social Emotional Learning.
● To explore the ways to build the sense of social and emotions towards the society.
● To identify the key stakeholders to contribute towards the social emotional learning.

Research Methodology:

The study is wholly based on the secondary data collected from various journals, books of eminent authors and the articles browsed from web sources.

Limitation of the study:

The study is based on the secondary data and the perception of the researcher, so may be biased and incomplete. Lack of time may also be one of the limitations.

Need of Social Emotional Learning:

With the fastest changes in tecno driven society, Social Emotional Learning cannot be ignored. Social and emotional competency in each and every thing is now adays is very much significant alloted quality in every human being for the peaceful and sustainable future world. Emotions and response to emotions are the two burning issues which can lead to war, thereby burn the lives of many and at the same can win the hearts of infinity, thereby lead to the greatest. The Components of Social Emotional Learning make a person to the high role,by making him to not to crossing the limits , like how a boundary works in any game.

- Peace went to peace:
  Social and emotional learning and the acceptance of any thing in the mind of peace are the inspeable things , which makes a person to preserve the relationship and prosperity. But nowadays rush is not the word of four letters ,but has dominated all the four corners of a living being, which has not only the put the peace of mind of himself and also the persons connected with each other's . This is why the Social Emotional Learning has gained a lot of importance.

- Future of Sustainable Development:
  With the many pains in all possible ways and awareness, Present Generation are well prepared for the development,only if the result is sustainability, but the same cannot be expected from future generations for their future generations. So managing non human things, by keeping the view of future, managing human beings and preparing mind set with emotions and feelings is also necessary, to make the world continue to be long lasting.

- Not only Physical Health, but also Mental Health:
  A man with unlimited effort to maintain Physical health, may face failure if the mentally is in a complex situation. Even Though after all the required sufficiencies , if he is not accepted as a healthy, he will be remained as ill.So this is need for inculcating Social Emotional Learning in the curriculum at the time of study only.

- From breakups to connectedness:
  In the olden days, the only weapon with the people to any problem was togetherness and connectedness. With the advent of technology, the necessity of people around substituted with non-human things. Now the human beings are fed of these material things also, which shows their maturity and won over the technology, but facing failure to make connections in between the humans beings.

- Maximum returns with minimum efforts:
  To any success there is no shortcut route , but the way for success can be perceived as simple ,only with the help of Strongness of the mental health. So Academic excellence with Social Emotional Learning can be attained with less cost.

- Optimistic rather than pessimistic:
  Even after great success some are in the threat of negative mindset, which deny such people to feel the prgrance of success and spread. With the strong power of mind and heart ,one can embrace the optimistic thought, even he may be at the worst situation. Self confidence is great outcome of Social Emotional Learning.

- Fosters Resilience:

precautions are better than cure is the thoughts of mouth, over the years , but majority facing fail in this. Social Emotional Learning is the one way which helps cope with adversity and setbacks.

Contributories of Social Emotional Learning

Social Emotional Learning is a holistic approach where one's overall development can be expected, but for whole development of one can be achieved only if the efforts come from all around. The important participants, who can contribute towards the social emotional learning will be

- Teachers
- Parents
- Friends and Family
- Industries
- Hospitals
- Charitable institutions
- Financial Institutions
- Law and administration people
- Agriculturists

The lessons, leaned for the long lasting life with satisfaction under Social Emotional Learning are

- Self-Awareness:
    1. Identifying emotions and thoughts
    2. Recognizing strengths and weaknesses
    3. Setting boundaries
    4. Practicing mindfulness and self-reflection
    5. Developing self-confidence
- Self-Management:
    1. Managing stress and anxiety
    2. Regulating emotions
    3. Setting goals and priorities
    4. Practicing self-discipline
    5. Developing resilience
- Social Awareness:
    1. Empathy and active listening
    2. Understanding different perspectives
    3. Recognizing social cues
    4. Developing interpersonal skills
    5. Building relationships
- Relationship Skills:
    1. Effective communication
    2. Conflict resolution
    3. Negotiation and compromise
    4. Building and maintaining friendships
    5. Practicing teamwork

- Responsible Decision-Making:
  1. Evaluating consequences
  2. Considering multiple perspectives
  3. Making informed choices
  4. Practicing problem-solving
  5. Developing critical thinking

Findings and Analysis:

- The habit has changed in a wide range.
- Passion towards technology has increased.
- Information moves faster than any other.
- Time for thinking and analysis has majorly decreased.
- Environment at home plays an important role.

Suggestions :

- Social Emotional Learning is inculcated in NEP 2020, but also application and methods of application need to be given attention.
- Social Emotional Learning should be determined at various stages of education in aspect wise and method wise.
- The contributories should be trained enough to stand infront of the beneficiaries.
- History needs to be clarified to base values on which.

Conclusion:

Social and Emotional Learning (SEL) has the potential to play a pivotal role in promoting peace and sustainable development. By fostering the development of competencies such as empathy, critical thinking, open-mindedness, and responsible decision-making, SEL enables persons to navigate the increasingly complex world. Even more importantly, these competencies equip individuals for the unforeseen challenges of the future. However, for SEL to be truly effective, it must be integrated into a broader strategy that addresses structural inequities, adapts to cultural contexts and is based on a holistic approach to learning.

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DEVELOPING EMOTIONAL INTELLIGENCE: ENHANCING PERSONAL AND PROFESSIONAL EFFECTIVENESS

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Abstract

Emotional intelligence (EI) is a vital component of personal and professional success, enabling individuals to navigate complex social dynamics, build strong relationships, and achieve greater well-being. This comprehensive overview explores the development of emotional intelligence, highlighting its significance, benefits, and practical strategies for improvement.

Key aspects of emotional intelligence, including self-awareness, self-regulation, motivation, empathy, and social skills, are examined. Effective techniques for cultivating emotional intelligence, such as mindfulness, self-reflection, and active listening, are discussed.

A concise introduction to emotional intelligence, an exploration of EI's role in personal and professional growth, Practical strategies for developing emotional intelligence, Insights into overcoming emotional intelligence challenges, Actionable steps for integrating EI into daily life.

By developing emotional intelligence, individuals can enhance their relationships, decision-making, and overall quality of life. This abstract serves as a foundation for those seeking to understand and cultivate emotional intelligence.

Keywords: *Emotional Intelligence, Personal Growth, Professional Development, Self-Awareness, Empathy, Social Skills, Mindfulness, Self-Reflection.*

Introduction:

Emotional intelligence (EI) refers to the ability to recognize and understand emotions in oneself and others, and to use this awareness to guide thought and behaviour. Developing emotional intelligence is crucial for achieving personal and professional success, building strong relationships, and effectively managing stress and conflict.

Definition of Emotional Intelligence:

Emotional Intelligence (EI) refers to the ability to recognize and understand emotions in oneself and others, and to use this awareness to guide thought and behavior. EI involves being able to manage one's own emotions, empathize with others, and develop effective relationships.

Components of Emotional Intelligence:

There are several models of EI, but most include the following five components:

1. **Self-Awareness (Intrapersonal Intelligence):**
   - Recognizing and understanding one's own emotions
   - Identifying personal values, strengths, and weaknesses
   - Self-reflection and introspection
   - Awareness of one's emotional triggers and patterns

2. **Self-Regulation (Emotional Control):**
   - Managing one's own emotions and impulses
   - Regulating stress, anxiety, and other negative emotions
   - Developing self-discipline and self-motivation
   - Ability to adapt to changing situations

3. **Motivation (Drive):**
   - Driving oneself to achieve goals and overcome obstacles
   - Maintaining a positive attitude and outlook
   - Being resilient and adaptable
   - Having a growth mindset
4. **Empathy (Interpersonal Intelligence):**
   - Understanding and recognizing emotions in others
   - Perspective-taking and active listening
   - Developing effective relationships
   - Recognizing and responding to emotional cues
5. **Social Skills (Interpersonal Effectiveness):**
   - Effective communication and conflict resolution
   - Building and maintaining relationships
   - Negotiation and persuasion
   - Ability to navigate complex social situations
6. **Additional Components (some models):**
   - Self-Expression: Ability to express emotions effectively
   - Conflict Resolution: Ability to manage and resolve conflicts
   - Emotional Memory: Ability to recall and learn from emotional experiences
   - Intuition: Ability to make decisions based on emotional awareness

Importance of Emotional Intelligence:

1. **Personal Benefits:**
   - Better relationships: Emotional intelligence helps you communicate effectively, empathize with others, and build strong relationships.
   - Stress management: EI enables you to recognize and manage your emotions, reducing stress and anxiety.
   - Self-awareness: Understanding your emotions helps you identify your strengths, weaknesses, and motivations.
   - Decision-making: Emotional intelligence informs your decision-making process, ensuring more thoughtful and informed choices.
   - Mental health: EI helps you recognize early warning signs of mental health issues, such as depression or anxiety.
2. **Professional Benefits:**
   - Effective leadership: Emotional intelligence is a key characteristic of successful leaders, enabling them to inspire, motivate, and manage teams.
   - Team collaboration: EI facilitates effective communication, conflict resolution, and teamwork.
   - Customer service: Understanding customer emotions helps you provide exceptional service and resolve issues efficiently.
   - Conflict resolution: Emotional intelligence enables you to manage conflicts and negotiate effectively.
   - Career advancement: EI is linked to job performance, job satisfaction, and career success.

3. **Social Benefits:**
   - Empathy and compassion: Emotional intelligence fosters understanding and kindness towards others.
   - Social skills: EI enhances your ability to navigate social situations, build networks, and maintain friendships.
   - Community building: Emotional intelligence promotes a positive, supportive community environment.
   - Diversity and inclusion: EI help you appreciate and respect diverse perspectives and cultures.
   - Social responsibility: Understanding emotions encourages responsible behaviour and civic engagement.

Strategies for Developing Emotional Intelligence:

1. **Self-Awareness:**
   - Journaling: Record your thoughts, emotions, and reactions to events.
   - Mindfulness: Practice meditation, deep breathing, or yoga to recognize emotions.
   - Self-reflection: Schedule regular time for introspection.
   - Identify emotional triggers: Recognize patterns and situations that evoke strong emotions.
   - Label your emotions: Accurately name and accept your feelings.

2. **Self-Regulation:**
   - Emotional labelling: Acknowledge and accept emotions before acting.
   - Take a pause: Delay reacting to emotional stimuli.
   - Deep breathing: Calm yourself in stressful situations.
   - Physical exercise: Regular activity reduces stress and anxiety.
   - Grounding techniques: Focus on the present moment.

3. **Motivation:**
   - Set goals: Identify and pursue meaningful objectives.
   - Find purpose: Align actions with values and passions.
   - Positive self-talk: Encourage yourself with affirmations.
   - Celebrate successes: Acknowledge achievements.
   - Learn from failures: Extract valuable lessons.

4. **Empathy:**
   - Active listening: Focus on others' emotions and concerns.
   - Ask open-ended questions: Encourage sharing.
   - Perspective-taking: Imagine others' viewpoints.
   - Observe nonverbal cues: Pay attention to body language.
   - Engage in role-playing: Practice different perspectives.

5. **Social Skills:**
   - Practice assertiveness: Express needs and boundaries clearly.
   - Develop effective communication: Use "I" statements, clarify expectations.
   - Conflict resolution: Address issues promptly, seek common ground.
   - Build relationships: Nurture connections through empathy and shared interests.
   - Seek feedback: Encourage constructive criticism.

6. **Additional Strategies:**
   - Seek mentorship: Learn from emotionally intelligent role models.
   - Engage in emotional intelligence training: Participate in workshops or courses.
   - Practice gratitude: Focus on positive aspects.
   - Develop self-compassion: Treat yourself with kindness.
   - Learn to forgive: Let go of grudges and negative emotions.

7. **Daily Habits:**
   - Morning reflection: Set intentions and acknowledge emotions.
   - Evening review: Reflect on experiences and emotions.
   - Mindful moments: Take short breaks for deep breathing.
   - Connect with nature: Spend time outdoors.
   - Engage in creative expression: Write, draw, or create.

8. **Long-Term Commitment:**
   - Prioritize emotional intelligence development.
   - Set realistic goals and track progress.
   - Seek support from friends, family, or professionals.
   - Embrace challenges as opportunities for growth.
   - Cultivate patience and persistence.

Challenges and Limitations:

Internal Challenges:

1. **Self-awareness biases:** Difficulty recognizing one's own emotions and biases.
2. **Emotional regulation struggles:** Managing intense emotions, such as anger or anxiety.
3. **Lack of motivation:** Struggling to find purpose and drive.
4. **Defensiveness:** Resisting constructive feedback and criticism.
5. **Emotional numbness:** Difficulty experiencing and expressing emotions.

External Challenges:

1. **Cultural and social norms:** Conflicting cultural or social expectations around emotional expression.
2. **Organizational barriers:** Unsupportive work environments or toxic cultures.
3. **Technological overload:** Managing emotions in a digitally driven world.
4. **Trauma and stress:** Coping with past traumas or chronic stress.
5. **Neurodiversity:** Emotional intelligence differences in individuals with neurodevelopmental disorders.

Limitations of Emotional Intelligence:

1. **Overemphasis on individual responsibility:** Ignoring systemic or structural issues.
2. **Cultural and contextual limitations:** Emotional intelligence models may not translate across cultures.
3. **Measurement challenges:** Difficulties in accurately assessing emotional intelligence.
4. **Overreliance on self-reporting:** Biased self-assessments.
5. **Lack of standardization:** Varied definitions and models of emotional intelligence.

Dark Side of Emotional Intelligence:

1. **Manipulation:** Using emotional intelligence to manipulate others.

2. **Emotional labour:** Suppressing emotions to maintain a facade.
3. **Over empathizing:** Taking on others' emotions to the point of burnout.
4. **Emotional contagion:** Catching and spreading negative emotions.
5. **Emotional exploitation:** Using emotional intelligence to exploit others' vulnerabilities.

Mitigating Strategies:

1. **Contextual understanding:** Consider cultural, social, and environmental factors.
2. **Self-reflection and awareness:** Recognize personal biases and limitations.
3. **Emotional regulation strategies:** Develop healthy coping mechanisms.
4. **Seeking support:** Consult mentors, coaches, or therapists.
5. **Continuous learning:** Stay updated on emotional intelligence research and best practices.

Future Research Directions:

1. Cultural and contextual adaptations of emotional intelligence models.
2. Development of more objective measurement tools.
3. Exploring the intersection of emotional intelligence and technology.
4. Investigating the impact of emotional intelligence on physical health.
5. Examining the role of emotional intelligence in social and environmental sustainability.

Recommendations:

1. Incorporate EI training in organizational development programs.

2. Encourage self-reflection and feedback.

3. Foster a culture that values emotional intelligence.

Conclusion:

Developing emotional intelligence is essential for personal and professional growth. By understanding and applying EI concepts, individuals can enhance their relationships, achieve greater well-being, and succeed in their careers.

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A STUDY ON RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND ACADEMIC ACHIEVEMENT

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Abstract

In the current competitive environment where students are expected to perform multi roles with efficiency and effectiveness, it is highly needed to develop their right attitude and emotional intelligence towards the unseen complexities of life and quality education..   Emotional intelligence describes the ability, capacity, skill, or self-perceived ability to identify, assess, and manage the emotions of one's self, of others and of groups. Emotional intelligence refers to the ability to perceive, control, and evaluate emotions. Emotional intelligence is described by the capability to understand emotions, recognize emotions, help thought to build from emotions and skill to control emotions which leads to intellectual development . Emotional intelligence helps individuals to grow intellectually and helps in achieving milestones at workplace. The aim of the present research paper is to find out the relationship between emotional intelligence and academic achievement among undergraduate students. Keeping the aim of the study , correlation has been calculated between emotional intelligence and academic achievement among undergraduate students. The total number of 100 undergraduate. students of Davangere University has been selected for measuring relationship between academic achievements and emotional intelligence. The primary data has been collected by Emotional Intelligence Scale. Emotional intelligence is positively correlated with academic achievement. In the present study Mean, Slandered Deviation, 't' test and co-efficient of correlation statistical techniques were used to analyse the data. The outcome of the research indicates that emotional intelligence could predict academic achievement of undergraduate students.. So, there is a need to understand the impact of the emotional intelligence on academic achievements of the undergraduate students. Therefore, the present study intend to study the relationship between Emotional Intelligence and Academic Achievements of undergraduate students. Study reveals that there is a positive correlation between emotional intelligence and academic achievement.

Keywords: Emotional Intelligence, Academics Achievements, Relationship

Introduction: Emotional intelligence is described by the capability to understand emotions, recognize emotions, help thought to build from emotions and skill to control emotions which leads to intellectual development. Emotional intelligence helps individuals to grow intellectually and helps in achieving milestones at workplace. Emotions and intelligences are two phases of a coin because sometimes emotions help in taking right decision while sometimes intelligence help in provoking emotions. Emotional intelligence help individuals to grow in their life and leads to development in their career. For effective learning it is mandatory for students to develop an understanding the new ways to learn and it involves self-control, confidence, and cooperation with others. Emotional intelligence helps in describing the new ways of behaving that differentiate individuals from each other's. The understanding of own emotions and presenting themselves as a better person helps in better relationship and better understanding of others at workplace. a high emotional intelligence helps maintain a state of harmonies and quiet in oneself and finally be more self-confident in dealing with the challenges of living and learning in educational institutions. High emotional intelligence can contribute to a student in the learning process.

Emotional intelligence is defined as "The subset of social intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions."   Other definition of emotional intelligence is "an

array of non-cognitive skills, capabilities and competencies that influence a person's ability to cope with environmental demands and pressures." Similarly, emotional intelligence is non-cognitive skills which is helping in taking decision of daily chores of the individuals. The various studies claim that people who are equipped with greater degree of emotional intelligence generally have greater level of self-confidence, more attentive that leads them to have successful in their life and jobs. This is also found that these individuals are more effective in leadership and easily influence their staff and can motivate them. Generally, the organizations select the individuals who achieve great during their study with their intelligence capability during the recruitment and selection process . The person that reflect high emotional intelligence quotient helps in achieving personal as well as organizational goals. Emotional intelligence can also bring commitment, loyalty and trust towards organization which leads to increase in productivity and effectiveness in the organization. Emotional intelligence is a kind of social intelligence that involves the ability to control the emotions of self and others, to distinguish between types of emotion, using information to guide thinking and actions of a person. Emotional intelligence can be categorized into five aspects of the dominance of self-awareness, emotional management, self motivation, empathy and interpersonal skills.

Academic achievement is the outcome of education the extent to which a student, teacher and institution has achieved their educational goals. Academic achievement refers to the extent to which learners acquire the knowledge, skills and proficiencies that the instructor seeks to teach or assign.

Review of Related Literature: Parker and others (2005) examined the impact of emotional intelligence on the successful transition from high school to university. Results revealed that academically successful students had significantly higher levels of several different emotional and social competencies. These findings suggest that emotional intelligence plays an important role in the successful transition from high school to university. As emotional intelligence works as a predictor of academic performance. Sharon & Grinberg, (2018) conducteda prospective study done in Israel to examin the relationship between emotional intelligence scores and the traditional academic admission criteria Grade Point Average and evaluation methods of a baccalaureate nursing program. The authors found a positive correlation between the level of emotional intelligence and the degree of success in nursing studies. However, the study was con-ducted in one academic center nursing program and selected students, therefore it may not be generalized to other programs as well as to all students' academic levels. Two descriptive correlational studies were conducted in UK among nursing students. Di Fabio & Saklofske, Benington (2020) examined the relationship between emotional intelligence and nursing performance. The results showed that academic achievement is significantly correlate with emotional intelligence scores. The study was limited by using two websites and it could be confusing to some student. Cheshire et al., Roso-Bas (2015) conducted a study and research assumed that there is no relationship between emotional intelligence and academic achievement. A study done on baccalaureate nursing students in the US, demonstrated that there is no significant relationship between emotional intelligence and students' academic achievement.

Need and Significance of the Study: Emotional intelligence is a term that has grown in popularity as well as controversy in the present decade. Emotional intelligence has evolved since its inception; though there is still much debate on its meanings, measures, applications and generalizability. It is popularized Emotional intelligence by claiming it was the best predictor of success in life since it accounts outstanding performance. There is attraction to the idea that Emotional intelligence explains why some

people do well in life while having average intelligence while others struggle. Many researcher examined the relationship between emotional intelligence and academic achievement. Since students differed in cognitive ability, with some students being better prepared for the collegiate environment than others, the role of emotional intelligence in academic achievement must be better understood.

Research Problem: The present study is entitled as, "A study on relationship between emotional intelligence and academic achievement."

Objectives of the Study :

1.To study the relationship between emotional intelligence and academic achievements of B.Sc., undergraduate students.

2.To study the academic achievement among B.Sc., undergraduate students of high and average emotional intelligence.

3.To study the academic achievement among B.Sc., undergraduate students of high and low emotional intelligence.

4.To study the academic achievement among B.Sc., undergraduate students of average and low emotional intelligence.

Hypotheses of the Study :

1.There is no significant relationship between emotional intelligence and academic achievement of B.Sc. undergraduate students.

2.There is no significant difference in academic achievement among B.Sc. undergraduate students of high and average emotional intelligence.

3.There is no significant difference in academic achievement among B.Sc. undergraduate students of high and low emotional intelligence.

4.There is no significant difference in academic achievement among B.Sc. undergraduate students of average and low emotional intelligence.

Scope of the Study: Due to limitation of time and cost the sample size is kept small. The study is undertaken in the Davangere city of Karnataka. The data was collected from the B.Sc., undergraduate students of Davangere University.

Research Design: This study is descriptive and exploratory in nature. Both primary as well as secondary analysis of data is undertaken. The researcher has made an attempt to satisfy the objectives of the study by testing the hypothesis. The instrument used to collect primary data is structured questionnaire which is duly filled by the undergraduate students.

Research Instrument : Emotional Intelligence Scale has been developed by Schutleet al., (1998) to measure emotional intelligence. It is a five point rating scale and the ratings are Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree, which measures five domains of EI such as Self-recognition (knowing your emotions), Self-regulation (managing your emotions), Self-motivation (motivating yourself) Empathy (recognizing and understanding others emotions) and Handling relations (managing emotions of others). B.Sc., undergraduate students. were asked to record their responses on a separate answer sheet. There are 33 items and usually it takes 20 minutes to complete the test.

Academic Achievement Scale: The Academic Achievement Scale has been used to measures the students' familiarity and knowledge of the issues and different topics covered in class with the help of 40 multiple choice questions. The questions were developed from the contents covered in the class during the lecture.

Sample and Sampling Technique: In the present study 100 students studying in B.Sc., sixth semester were selected using simple random sampling techniques. The students were selected irrespective of sex, locality, socio economic status, race, mental age and off almost same chronological age.

Statistical Technique used: To analyze the data under study certain statistical techniques are necessary. In the present study Mean, Slandered Deviation, 't' test and co-efficient of correlation statistical techniques were used to analyze the data. With the help of all these techniques hypotheses were verified and objectives were fulfilled.

Data Analyses and Result:

Table 1 : Correlation between emotional intelligence and academic achievements of B.Sc., undergraduate students.

Variables	'r' Value	't' Value	Level of Significance
Emotional Intelligence Academic Achievement	0.64	7.41	0.01

It is inferred from the above table that, the obtained 'r' value 0.64 is significant at 0.01 level. The result shows that there is a significant relationship between emotional intelligence and academic achievements of B.Sc., undergraduate students. From this it can be concluded that students with high emotional intelligence are better in their academic achievements. Hence the null hypothesis there is is no significant relationship between emotional intelligence and academic achievement of B.Sc. undergraduate students is rejected and alternative hypothesis there is a positive significant relationship between emotional intelligence and academic achievement of B.Sc. undergraduate students is accepted.

Table 2: Mean, Standard Deviation and 't' value of high and average emotional intelligence groups

Groups	Mean	SD	't' Value	Level of Significance
High Emotional Intelligence	29.96	5.29	3.34	0.01
Average Emotional Intelligence	25.75	5.18		

It is inferred from the above table that, the obtained 't' value 3.34 is significant at 0.01 level. The result shows that students with high emotional intelligence have high academic achievements (Mean =29.69) when compare to students with average emotional intelligence (Mean = 25.75). Hence the null hypothesis there is no significant difference in academic achievement among B.Sc. undergraduate students of high and average emotional intelligence is rejected and alternative hypothesis there is a significant difference in academic achievement among B.Sc. undergraduate students of high and average emotional intelligence is accepted.

Table 3 : Mean, Standard Deviation and 't' value of high and low emotional intelligence groups

Groups	Mean	SD	't' Value	Level of Significance
High Emotional Intelligence	29.96	5.29	7.07	0.01
Low Emotional Intelligence	21.40	3.27		

It is inferred from the above table that, the obtained 't' value 7.07 is significant at 0.01 level. The result shows that students with high emotional intelligence have high academic achievements (Mean =29.69) when compare to students with low emotional intelligence (Mean =21.40). Hence the null hypothesis there is no significant difference in academic achievement among B.Sc. undergraduate students of high and low emotional intelligence is rejected and alternative hypothesis there is a significant difference in academic achievement among B.Sc. undergraduate students of high and low emotional intelligence is accepted.

Table 4 : Mean, Standard Deviation and 't' value of average and low emotional intelligence groups

Groups	Mean	SD	't' Value	Level of Significance
Average Emotional Intelligence	25.75	5.18	4.43	0.01
Low Emotional Intelligence	21.40	3.27		

It is inferred from the above table that, the obtained 't' value 4.43 is significant at 0.01 level. The result shows that students with average emotional intelligence have high academic achievement (Mean =25.75) when compare to students with low emotional intelligence (Mean =21.40). Hence the null hypothesis there is no significant difference in academic achievement among B.Sc. undergraduate students of average and low emotional intelligence is rejected and alternative hypothesis there is a significant difference in academic achievement among B.Sc. undergraduate students of average and low emotional intelligence is accepted.

Findings:

1. It is found that there is a significant relationship between emotional intelligence and academic achievements of B.Sc., undergraduate students.
2. It is found that, academic achievement of students with high emotional intelligence is high compare to academic achievement of students with average emotional intelligence .
3. It is found that, academic achievement of students with high emotional intelligence is high compare to academic achievement of students with low emotional intelligence .
4. It is found that, academic achievement of students with average emotional intelligence is high compare to academic achievement of students with low emotional intelligence .

Educational Implications:

1. It is suggested to education world that teachers should now focus on the factors revealed in the study to develop highly emotionally intelligent youth to with such competencies where the academic achievement and social intelligence can be achieved and applied as well at the most.

2. Emotional Intelligence is not, in itself, sufficient to create optimal outcomes for youth. However, the way emotional intelligence is used, both by youth and those who support them has a powerful effect on the indivisual's lives.

3. The support extended from the parents, facilities at home and in the institutional environment which is very conducive for students in both for the better development of emotional intelligence and academic achievement of the students.

4.Teachers and parents should provide opportunities to students in order to develop high emotional intelligence.

Conclusion: As emotional intelligence is an important aspect of one's' life. Mostly the academic achievement is less what they are expected to achieve. In the present investigation it is found that among B.Sc. undergraduate students emotional intelligence is positively related to academic achievement. Emotional intelligence is the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in us and in our relationship. Present research paper shows that emotional intelligence is highly beneficial in the areas of education, work, and mental health. As student with high emotional intelligence are able to know their emotions and ability to understand and control their emotions are able to achieve academic success. Hence developing high emotional intelligence is a prime important for a better academic achievement.

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ROLE OF EMOTIONAL INTELLIGENCE IN IMPROVING ACADEMIC ACHIEVEMENT: A CORRELATIONAL STUDY OF SECONDARY SCHOOL STUDENTS

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Abstract

This research paper aims to investigate the role of emotional intelligence (EI) in enhancing the academic achievement of students at secondary education level, focusing on the relationship between EI and academic achievement. The proposed research will adopts a descriptive survey method, with a sample of 100 9th standard students selected through stratified random sampling from six schools in the Bengaluru North Educational Division. The Emotional Intelligence Scale by Anukool Hyde and Sanjyot Pethe (2002) was employed to assess students' EI studied as independent variable, while academic achievement data were collected from school office records studied as dependent variable. Background variables include gender (boys and girls) and type of management (government, private aided/unaided). The obtained data will be analyzed by using statistical techniques namely mean, standard deviation, correlation and independent 't' test, with a significance level set at 0.05. The results reveal a positive significant correlation between emotional intelligence and academic achievement, suggesting that students with higher emotional intelligence tend to perform better academically. Moreover, the study highlights the importance of incorporating emotional intelligence instruction into the school curriculum to improve students' overall performance. This research contributes to the emergent evidence that emotional intelligence is a serious factor in academic success and calls for educational policies that highlight emotional learning as part of overall student development.

Keywords: Emotional Intelligence, Academic Achievement, Secondary School, Students.

1. Background of the Study

In the present day, numerous of socioeconomic, political, cultural as well as technical developments have greatly affected the education systems and achievement is an inseparable aspect of student life in the school and it is the concern of the academic world. This explains the level and extent to which learners handle to perform in their academic work which is a clear indication on the ability to comprehend and use the information. Academic achievement includes bean counting in terms of evaluation or grades, but it also takes into account more costly social, economic and even political aspects related with education. This is very vital as it enables people to aim for the better positions in the society and it has a great capacity to enhance the living conditions of the individuals in the future. Students' future aspirations are illustrated through their dreams of achieving academic goals, which bore the 'fruit' of wealth and comfort in terms of employment.

1.1 Academic Achievement

Aspiration is the perception of one's operating competence in academic learning pursuits and academic achievement refers to actual attainments made by the student in relation to academics. According to the definition provided by Duman (2010), academic achievement is evaluative and manifests ascertainably through test scores, grades and general performance. Looking at it from the perspective of Reiger (2010), this is vital to the lives of young people because it promotes positive transitions into adulthood for those who are successful in their studies and ultimately success in career and economy. This element is particularly pertinent to student development as educators underscore this because of its local and even global consequences for the individual and society.

1.2 Emotional Intelligence and its Relationship with Academic Achievement

Emotional intelligence (EI) is the ability to identify, comprehend and control emotions, both in oneself and in others. It entails perceiving emotions, evaluating their meanings and applying this emotional knowledge to problem solving and decision making. Emotional intelligence is seen as an important aspect in leadership, interpersonal connections and performance. According to Goleman (1995), schools have been incorporating emotional intelligence training into their curricula for decades, with the goal of developing students' emotional competencies.

Emotional intelligence is critical for academic achievement in secondary school, especially among pupils in the Bengaluru North Educational Division. Adolescents frequently navigate complex emotional environments and a balanced emotional state allows them to focus on their academics and perform well academically. Given the important role that emotions play in personal and social development.

2. Significance of the Study

This study is important because it explores the link between student's academic achievement and emotional intelligence (EI) of second school students. Emotional, social and academic growth of the students is directly related with their emotions, especially in teenage years when they encounter increasing number of concerns about relation, identity, or achievement. Acquiring the skills to help kids manage how they feel about things helps them to learn how to regulate their emotions and this will improve their concentration, their ability to persevere of bounce back when knocked down and their balance – all of which are critical in class.

It is required that students succeed academically, learn skills for living, being creative as well as being emotionally intelligent in a world that is evolving. However, hand on heart, many students do not have self control especially when it comes to emotions, this later affects their concentration and consequently the performance. It is thus crucial to understand the extent to Rehabilitation of and needs for eradicating the deficit of, emotional intelligence at school. The purpose of the study is to explain whether or not splendid interpersonal skills and emotional stability employed by the pupils tend to result in splendid academic performance.

It will also give educators, legislators as well as school administrators a guide on how to launch an emotional intelligence training program in schools through a closer look at the correlation between emotional intelligence and academic achievement. Work such as these could help increase a student's interpersonal skills, which, coupled with their performance, would be healthy both physically and emotionally. The findings of this study could guide the patterning of instructional approaches and the sort of intervention that promotes the general well-being of students in secondary schools within the Bengaluru North Educational Division.

3. Review of Related Literature

Over the last few decades, there has been growing concern about the relationship between emotional intelligence (EI) and academic performance as many researchers and educators have seen how important emotional management is for performing academically. Many investigations have sought to figure out almost to what extent emotional intelligence enhances or impairs academic performance with especial regard to adolescents of different educational backgrounds. To provide an understanding of the corpus of studies in the context of academic achievement and emotional

intelligence, this review emphasizes relevant implications of research on such demographic variables as gender, school features, self-concept and the academic performance itself.

Empirical evidence in some studies shows that there exists a positive contribution of emotional intelligence on academic performance in various adapted school programs. In the work of Haripal and Bhuyan (2024), higher-secondary school students of Odisha witnessed a positively significant association between emotional intelligence and academic achievement. Similar finding was reported by Geetha and Porgio (2018) who learnt that children's achievement is highly associated with emotional intelligence and family setting in higher secondary students.

Other studies, such as those by Donark and Xavier (2018) and Bakhshi and Gupta (2016), emphasize the importance of emotional intelligence in improving academic performance in high school and secondary school students, lending credence to the notion that emotional regulation is an important factor in student achievement. Chamundeswari (2013) extended this perspective to higher secondary students, discovering that emotional intelligence was positively associated to academic achievement, with differences observed among students from different educational boards.

On the other hand, several research investigate additional elements that influence academic achievement. Rani et al. (2023) investigated self-concept and discovered no significant differences in academic achievement by gender or school type. Similarly, Sangeetha and Nityashree (2022) studied gender and emotional intelligence and concluded that while gender influences emotional intelligence, it has no significant association with academic achievement. Other research, such as Meisanam, Singh and Chanu (2022), found substantial variations in academic performance between private and government school students.

Research Gap

The literature provides a comprehensive understanding of emotional intelligence and academic achievement relations. A few of those research gaps such as cross-cultural differences or geographic contextualization should be tackled further. Most of the studies prefer generic relationships ignoring local geography or demographics. So far research linking emotional intelligence and academic achievement in secondary schools within the Bengaluru North Educational Division is scarce. In addition, there exists a gap in the literature regarding the exploration of certain factors such as the school, student-teacher interactions and socioeconomic background impacts on emotional intelligence and academic achievement.

In addition, while some studies also measure the gender role in emotional intelligence and the students' academic performance, the evidence is still confusing, especially as to how such factors coexist in secondary schools. This study will therefore increase the knowledge gap on how the two constructs co-exist in Bengaluru North Educational Division context by examining the unique relationship between emotional intelligence and academic achievement by school context and gender.

This research will provide a better perspective on the relationship between emotional intelligence and academic achievement in this population and region so that educators and policymakers can better work to help students out.

4. Statement of the Problem

The research problem identified for the current investigation is: "Role of Emotional Intelligence in Improving Academic Achievement: A Correlational Study of Secondary School Students."

5. Objectives of the Study

      The objectives of the research are as follows:

4. To examine the relationship between Academic Achievement and Emotional Intelligence of secondary school students.
5. To assess the difference in the Academic Achievement of secondary school students with different emotional intelligence levels.
6. To investigate the differences in the Academic Achievement of secondary school students with respect to gender and type of school management.

6. Research Hypotheses

      Following are the research hypotheses for the present research:

9. There is no significant relationship between Academic Achievement and Emotional Intelligence of secondary school students.
10. There is no significant difference in the Academic Achievement of secondary school students with low and moderate emotional intelligence levels.
11. There is no significant difference in the Academic Achievement of secondary school students with moderate and high emotional intelligence levels.
12. There is no significant difference in the Academic Achievement of secondary school students with low and high emotional intelligence levels.
13. There is no significant difference in the Academic Achievement of secondary school boys and girls.
14. There is no significant difference in the Academic Achievement of secondary school students studying in government and private aided schools.
15. There is no significant difference in the Academic Achievement of secondary school students studying in private aided and private unaided schools.
16. There is no significant difference in the Academic Achievement of secondary school students studying in government and private unaided schools.

7. Method Used

Population: Secondary school students enrolled in schools in the Bengaluru North Educational Division, Karnataka, India.

Sample Size: A stratified random sampling technique will be used to select 100 ninth-grade students from a variety of schools, ensuring that both boys and girls are represented. A research questionnaire was distributed to 100 ninth-grade students and their academic accomplishment statistics were acquired from office records for this study.

Tools for the Study: Anukool Hyde and Sanjyot Pethe (2002) developed and standardized the Emotional Intelligence Scale, which was used to test pupils' emotional intelligence. Academic accomplishment results were obtained from the different schools' office records, along with a personal proforma.

8. Analysis and Interpretation of Data

Table-1: Table shows correlation results on scores between Academic Achievement and Emotional Intelligence of secondary school students.

Variables	Mean	Standard Deviation	Obtained ' r' value	Level. of Sig.
Academic Achievement	397.740	91.290	0.410	*
Emotional Intelligence	91.120	13.499		

Significant at 0.05 level (0.195)

Table of correlations illustrates the relationship between students' performance in secondary school and their emotional quotient. The 'r' value in this context has resulted in being 0.410 significantly surpassing the table value of 0.195 at 0.05 level helps to ascertain the fact that there is substantial positivity in the relationship which exists between emotional intelligence and achievement. Therefore, the null hypothesis is not supported however the alternative hypothesis is supported "there is a significant positive relationship between the emotional intelligence and academic achievement of secondary school students". This means that pupils of high emotional intelligence are more likely to be more proficient in their studies than their counterparts with low levels of emotional intelligence.

Table-2: Independent 't' test results related to Academic Achievement scores of secondary school students with regard to emotional intelligence levels.

Emotional Intelligence Levels	Sample size	Mean	Std. Deviation	' t' Value	Sig. level
Low	8	268.500	41.165	8.12	*
Moderate	88	407.181	83.783		
Moderate	88	407.181	83.783	0.63	NS
High	4	448.500	130.019		
Low	8	268.500	41.165	2.70	*
High	4	448.500	130.019		

[NS]*Not Significant level ('t' Table Value for N=100; df=98 is 1.98 (*)).*

The table presents the academic achievement class scores of secondary school pupils concerning the various levels of their emotional intelligence.

One, Emphasis can be laid on the extreme values of the two groups namely the low and moderate emotional intelligence students who have a high independent t value of 8.12 (p<0.05). This shows that a significant difference in educational attainment exists between these two groups. Intermediate emotional intelligence students have higher mean scores (M=407.181) than poor emotional intelligence students (M=268.500). This points out the academic pref Gen of learners with intermediate emotional intelligence over those with poor emotional intelligence.

Students who have emotional rapport of moderate and higher grade yield independent t value of 0.63, which is not significant. In effect, there is no application accomplishment difference between the students performing within moderate high emotional intelligence levels and above since each score similarly in academic work.

Students who fall in the category of poor emotional and high emotional intelligence have body equally high and significant independent t value and p value of 2.70 (p<0.05). There is therefore a reasonable divide in academic accomplishment between these two categories. In contrast to the poor

emotional intelligence Students who achieved a t score of 268.500, emotional intelligent students scored a t mean of 448.500. This indicates better performance at the academic level.
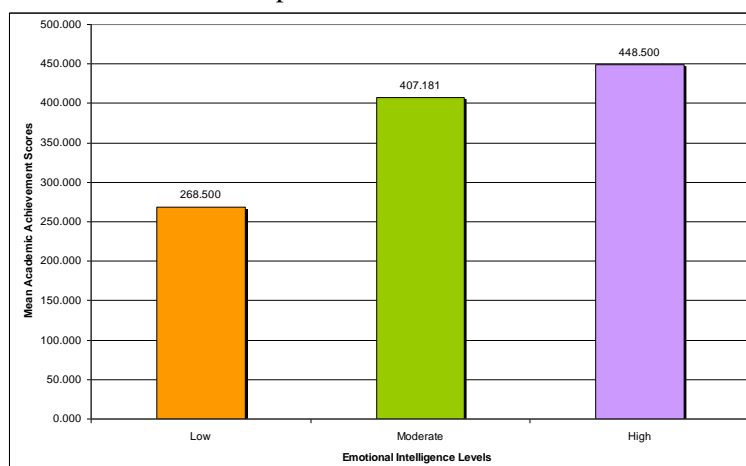
Fig 1: Comparison of mean academic achievement scores among secondary school students with low, moderate and high levels of emotional intelligence.

Table-3: Independent 't' test results related to Academic Achievement scores of secondary school students with regard to gender.

Gender	Sample	Mean	Std. Deviation	't' Value	Sig. level
Boys	50	378.200	93.944	2.18	*
Girls	50	417.280	85.048		

Significant at 0.05 level ('t' Table Value for N=100; df=98 is 1.98).

The 't' table provides the schooling achievement scores of male and female secondary school pupils. In the 't' value given for independence in academic achievement of boys and girls, the value is 2.18. This is considered significant at the 0.05 level. This stands out as one of the major differences in academic achievement between male and female student. The mean score for girls (M=417.280) was higher than that of boys (M=378.200) which suggests girls are more academically active than boys. This conclusion is also illustrated in Figure 2.
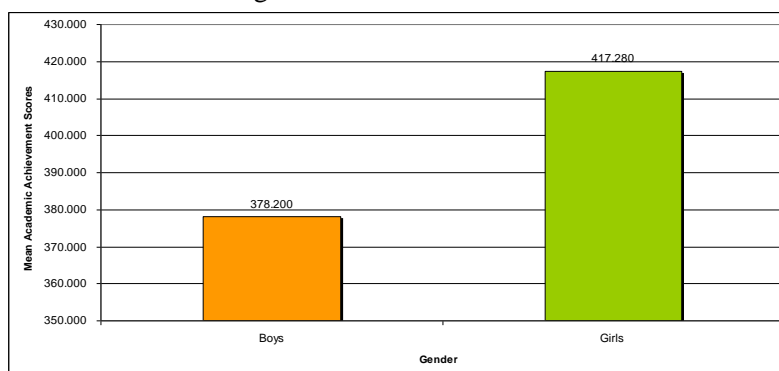
Fig 2: Comparison of mean academic achievement scores between secondary school boys and girls.

Table-4: Independent 't' test results related to Academic Achievement scores of secondary school students with regard to type of school management.

Type of School Management	Sample	Mean	Std. Deviation	' t' Value	Sig. level
Government	33	391.272	94.473	1.18	NS
Private Aided	33	364.000	92.401		
Private Aided	33	364.000	92.401	3.57	*
Private Unaided	34	436.764	72.928		
Government	33	391.272	94.473	2.20	*
Private Unaided	34	436.764	72.928		

*Significant at 0.05 level; [NS]Not Significant ('t' Table Value for N=66/67; df=64/65 is 2.00).

The 't' test table is used to show the academic achievement by secondary school pupils according to the type of school management.

In the independent t what pupils from government and private aided schools had, this is 1.18, which upsurges not the odds against the null hypothesis at 0.05 level. There exists no significant difference in the academic achievement of pupils who attend government and private aided schools which justified why both groups had similar academic performance.

Students in aided and unaided position have further a tasty of independent 't' value 3.57. Students in private unaided schools on average scored 436.764 while those in private aided scored 364.000 saying that private unaided schools had better academic performance.

Students in private un-aided and government aided schools have significant independent 't' value 2.20 at p-value <0.05. This implies that there is wide variation in the academic performance of these groups as well. Students in private un-aided schools have better performance score on average M= 436.764 than that in the government M=391.272 assuming students aim to gain knowledge and perform. This comparison is illustrated in figure 3.
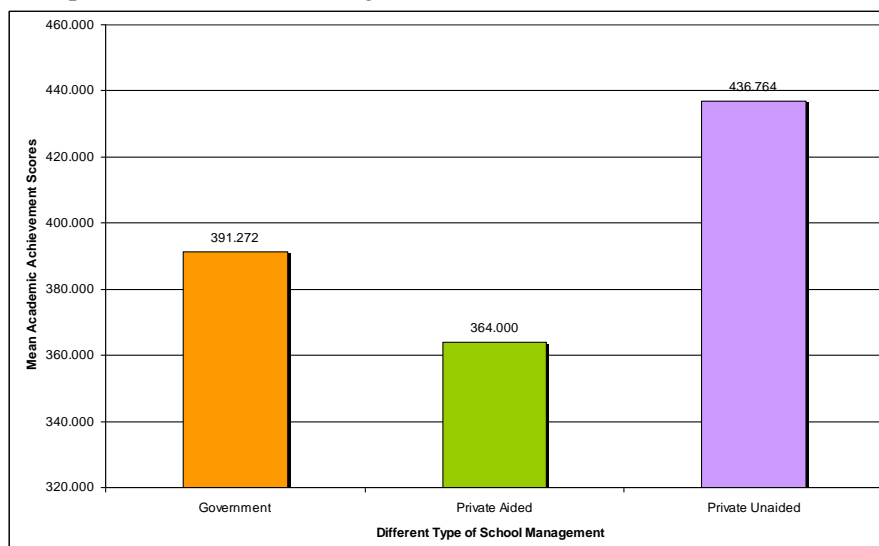
Fig 2: Comparison of mean academic achievement scores among secondary school students studying in government, private aided and private unaided schools.

9. Results

7. There exists a significant positive relationship between Academic Achievement and Emotional Intelligence among secondary school students.

8. There exists a significant difference in the Academic Achievement of secondary school students with low and moderate emotional intelligence levels.

9. There exists no significant difference in the Academic Achievement of secondary school students with moderate and high emotional intelligence levels.

10. There exists a significant difference in the Academic Achievement of secondary school students with low and high emotional intelligence levels.

11. There exists a significant difference in the Academic Achievement of secondary school boys and girls.

12. There exists no significant difference in the Academic Achievement of secondary school students studying in government and private aided schools.

13. There exists a significant difference in the Academic Achievement of secondary school students studying in private aided and private unaided schools.

14. There exists a significant difference in the Academic Achievement of secondary school students studying in government and private unaided schools.

10. Conclusion and Implications

The investigation found that those secondary school children who possess emotional intelligence tend to have better educational end result as well. The study also stresses additional factors including gender and kind of the school attended. In this context, boys, girls and students of different types of school management, including government and private aided and private unaided institutions, have different academic achievements. The current policy is that emphasis in development of emotional intelligence should be entertained to slowly be integrated into the school curriculum. Students who possess the low emotional intelligence elevated need to called alert and so teachers should be well prepared to attend to emotional needs within the classroom. Also, governments need to focus on narrowing the achievement gap among children attending different kinds of schools through measures which ensures that all children have equal distribution of resources and emotional support.

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A STUDY ON MENTAL HEALTH AND WELLBEING OF SECONDARY SCHOOL TEACHERS OF RAICHUR DISTRICT

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Abstract

The teaching profession has been consistently ranked as the most stressful job in the world today. Teachers who experience prolonged exposure to high levels of work-related stress can find there to be a detrimental effect on their physical health, mental health, social life, and work performance. This study aims to characterize the mental health and wellbeing of secondary school teachers of Raichur District according to gender and age group. We examined burnout levels as well as their sources of stress. The 200 teachers were selected sample of the study. The quantitative data analysis revealed that most of the teachers had experienced burnout in terms of their personal accomplishments, work-related stressors, and time management, and that it mostly manifested as fatigue. Overall, the sample of secondary school teachers of Raichur District indicates a risk of poor mental health. Further psychological interventions and self-care programs are suggested to help secondary school teachers cope with the early signs of burnout.

Keywords: *Wellbeing, Mental Health, Secondary School Teachers*

1. **Introduction**:

Teaching ranks among the world's most stressful professions which affect mental health and wellbeing. The environment in which teachers work is extremely stress-provoking (Sveinsdottir et al., 2007), and teachers have been shown to experience greater stress than other white-collar professionals (Munir et al., 2014). The teaching profession has also been identified as involving nearly twice the level of cynicism, professional strain, and sadness as other professions (Baig et al., 2016). Such a high level of stress could be attributed not only to the teachers' increased exposure to a toxic working environment but also to the higher demands of their job and the frequent need to work overtime (Rusli et al., 2006). As a consequence, adverse mental health conditions among teachers have become increasingly common and, as such, increasingly problematic (Bauer et al., 2007; Weber et al., 2005). If not handled effectively, the stress and mental pressure on teachers is bound to affect their mental health and impact their wellbeing. In the previous research, teachers who attributed their stress to internal factors reported higher levels of depersonalisation and emotional exhaustion as among the dimensions of burnout, as well as a higher intention to quit and more symptoms of illness, than the teachers who exhibited a lower score for stress who reported more personal accomplishments (Teles, et al., 2020; Wang et al., 2015). Among teachers, mental health deficiencies may not only cause them problems but also negatively impact their students as well. In fact, the teachers' mental health and wellbeing has been shown to affect their students' psychological wellbeing and their depressive symptoms were found to be associated with their students' mental health and wellbeing as well (Harding et al., 2019). In particular, depressive symptoms among teachers can also lower the quality of the classroom learning environment and the students' academic achievements (McLean & Connor, 2015). Among the other downsides, poor mental health among teachers can adversely impact their physical health—and even cause lower back pain—and in a vicious cycle, weakened physical health can intensify their anxiety and depression (Zamri et al., 2017). Over and above all of those trends, workload has been found to significantly affect the mental

health status of teachers (Samad et al., 2010), and especially high workloads can raise the risk of burnout in the form of emotional exhaustion (Jimenez & Dunkl, 2017).

The present study has also attempted to identify the teachers' mental health and wellbeing according to various dimensions through self-reported questionnaires, which has been rarely addressed in previous study.

1.1   Burnout:

In any human undertaking that involves working with other people, burnout can be defined as a syndrome with three dimensions: a reduced sense of personal accomplishment, depersonalisation, and emotional exhaustion (Maslach, 2003). According to Mukundan and Ahour (2011), a reduced sense of personal accomplishment among teachers could mean that they no longer feel capable of teaching students or helping them to grow. In contrast, depersonalisation among teachers experiencing burnout suggests a lack of sense of having a positive effect on the students. Last, emotional exhaustion among teachers is marked by fatigue and a feeling of being emotionally drained (Mukundan & Ahour, 2011). Multiple studies have pinpointed depersonalisation and emotional exhaustion as the central elements of burnout (Schaufeli & Salanova, 2007; Skaalvik & Skaalvik, 2010; Panari & Simbula, 2016). In one such study conducted by El Helou et al. (2016), elements in the school environment found to cause burnout among teachers included their relationships with administrators, their relationships with other teachers, the school's rules, and among new teachers without sufficient preparation, a sense of disillusionment. More recently, Khan et al., (2019) found that sources of burnout included environmental demands related to the teacher's role, the demands of the job, pressure in terms of time management, and a lack of resources, as well as personal demands imposed by their family and their personal perceptions, attitudes, beliefs, and involvement towards work.

In sum, burnout has been identified as a risk factor not only for poor physical health but also for poor mental wellbeing (Salvagioni et al., 2017), including heightened depressive symptoms (Hakanen & Shaufeli, 2012). Among teachers in particular, burnout is likely to increase the intention to leave the profession (Hong, 2012).

1.2   Stress among Teachers:

Being a teacher is undoubtedly a stressful job, and stress among teachers is a phenomenon known to occur around the world (Skaalvik & Skaalvik, 2016). Among researchers who have sought to define stress, Abebe and HaileMariam (2011) have posited that stress is due to either internal or external factors that increase the difficulty adapting, and they urge individuals experiencing it to intensify their efforts to maintain the equilibrium between themselves and their external environment. Jiang et al. (2017) added that stress occurs when a teacher's expectations differ from reality, and other researchers have agreed that stress results from an incongruence between a person's coping strategies and the demands of their situation (Okeke et al., 2014; Okeke et al., 2015). Among teachers, stress has more specifically been described as negative emotions experienced due to aspects of the profession (Kyriacou, 2010) and what teachers feel due to their failure to effectively cope with challenges in the workplace.

As for its negative effects among teachers, stress has been shown to accelerate career attrition (Lindqvist et al., 2014), manifest behaviourally in physical aggression and increased hostility (Kanchika et al., 2015), and be associated with job dissatisfaction and level of burnout. In contrast, teachers who reported feeling in control of their stressors had higher levels of job satisfaction and lower levels of emotional exhaustion (Wang et al., 2015). In research on sources of stress among teachers, Kourmousi and

Alexopoulos (2016) found that longer distances between the teachers' home and workplace can heighten discipline- and motivation related stressors, that a longer work experience lowers levels of professional distress and stress, and that female teachers perceive themselves to have more stress and work-related stressors than male teachers. The authors also found that younger teachers had higher levels of perceived stress than the older ones. Stress among new teachers can be derived from their relationships with other teachers, their relationships with their mentors, poor feedback, and poor classroom management (Paker, 2011; Mahmoudi & Özkan, 2016). Adding to that, Yusof (2011) found that the teachers' stress can be affected by the leadership style of the school administrator, while others have revealed that the teachers' stress stems from the pressure that they feel when it comes to being held accountable for test based evaluations (Ryan et al., 2017; Saeki et al., 2018)

Against that background, we aimed to evaluate the mental health and wellbeing of secondary school teachers in Raichur District by identifying their level of burnout, sources of stress, manifestations of stress, and experiences with the symptoms of mental health conditions. We also aimed to identify any differences in the mental health and wellbeing of said teachers according to their gender and age group. The results are expected to clarify the mental health and wellbeing of teachers in Raichur District in general and to aid in identifying their sources of stress.

2.   **Methods**:

The present study aimed to provide an overview of secondary school teachers' of Kalaburgi district mental health and wellbeing. Therefore, the objective of the present study was to examine the (1) burnout and (2) stress, of the secondary school teachers from Kalaburgi district. The study hypothesised that the Raichur District secondary school teachers are experiencing (1) burnout and (2) stress,

2.1   Research Design

The present study used the quantitative research methodology. The data required in this study was collected using a self-reported questionnaire scored using a Likert scale. The present study also used a cross-sectional design for the data collection whereby all data required was collected from the participants.

2.2   Sample:

200 secondary school teachers of Raichur district were considered as a sample for the study. We examined burnout levels among 200 secondary school teachers who were measured across three dimensions (i.e., depersonalisation, emotional exhaustion, and personal accomplishment), as well as their sources of stress

2.3   **Tools used**:

a)   **Maslach Burnout Inventory:** Maslach Burnout Inventory designed to gauge burnout among educators in three dimensions (depersonalisation, emotional exhaustion, and personal accomplishment) The scale consisted of 22 items—seven on the Depersonalisation subscale, seven on the Emotional Exhaustion subscale, and eight on the Personal Accomplishment subscale—all rated on a 7-point Likert scale ranging from 0 (never) to 6 (always). For the Maslach Burnout Inventory's Depersonalisation subscale, scores that were less than 6 indicated "Low burnout," scores of 6–11 indicated "Moderate burnout," and scores greater than 11 indicated "High burnout."

b)   **Fimian's (1984) Teacher Stress Inventory:** The teachers' sources and manifestations of stress were identified using Fimian's (1984) Teacher Stress Inventory containing 49 items measured on a 5-point Likert scale ranging from 1 (no strength, not noticeable) to 5 (major strength, extremely

noticeable) such that higher scores indicate a stronger source of stress or a more frequent manifestation of stress. For the Teacher Stress Inventory, an average score between 0 and 1 indicated "No strength," an average score between 1 and 2 indicated "Mild strength," an average score between 2 and 3 indicated "Moderate strength," an average score between 3 and 4 indicated "Great strength," and an average score between 4 and 5 indicated "Extreme strength."

2.3. **Statistical techniques used:**

Frequency, Percentage and Mean Statistical techniques were used

3. **Data analysis**

3.1. **Burnout among the Secondary School Teachers in Raichur District Overall**

Table 1 Burnout among the Secondary School Teachers in Raichur District Overall

Level of burnout	Depersonalization		Emotional exhaustion		Personal accomplishment	
	F	%	F	%	F	%
Low burnout	50	25	54	27	44	22
Moderate burnout	90	45	94	47	88	44
High burnout	60	30	52	26	68	34
Total	200	100	200	100	200	100

The Maslach Burnout Inventory - Educators Survey was used to identify burnout among the participating secondary school teachers in Raichur District. As presented in Table 1, most participants (34%) reported a higher level of burnout in the dimension of personal accomplishment than in the dimensions of depersonalization (30%) and emotional exhaustion (26%). Generally, teachers were less likely to experience emotional exhaustion than the other two dimensions, as 26% of them reported a low level of burnout for that dimension specifically.

Graph-1: Burnout among the Secondary School Teachers in Kalaburagi District Overall
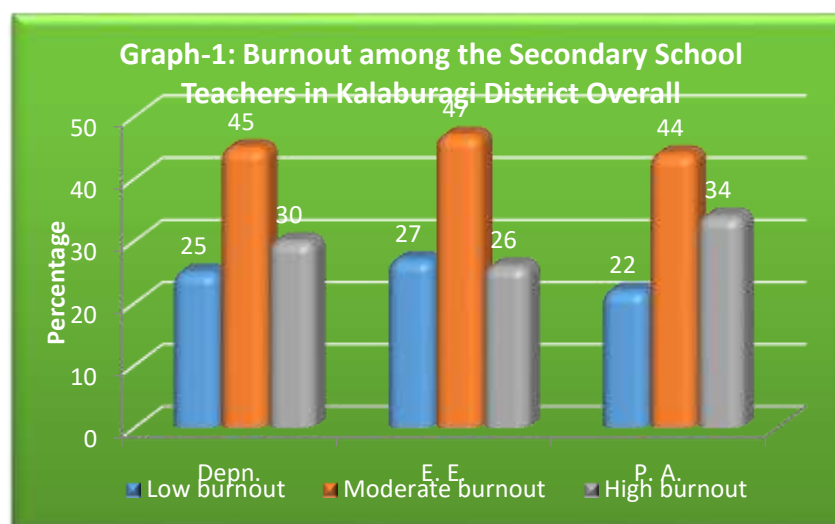
3.2. **Teachers' Sources of Stress:**

Table- 2

Sources of Stress among the Teachers in Raichur District Overall

Type of stressor/ Level of strength	Time management		Discipline and motivation		Professional distress		Work-related stressors		Professional investment	
	F	%	F	%	F	%	F	%	F	%
No strength	12	6	21	10.5	20	10	14	7	27	13.5
Mild strength	20	10	35	17.5	30	15	18	9	25	12.5
Moderate strength	80	40	70	35	80	40	78	39	78	39
Great strength	20	10	40	20	40	20	60	30	38	19
Extreme strength	68	34	34	17	30	15	30	15	32	16
Total	200	100	200	100	200	100	200	100	200	100

The Teacher Stress Inventory was used to identify the teachers' sources of stress. Generally, based on Table 2, the teachers reported that their top stressors were work-related stressors—15% reported those stressors as having "Extreme strength," while 30% reported them as having "Great strength"—followed by time management, 34% of which reported as having "Extreme strength" and 40% as having "Great strength." The next strongest stressor for the teachers was discipline and motivation, 17% of whom reported as having "Extreme strength" and 20% as having "Great strength." After that was professional distress, which 15% of teachers reported as having "Extreme strength" and 20% for "Great strength". The weakest source of stress experienced by the teachers was professional investment, with 16% of whom reported it as having "Extreme strength" and 19% as having "Great strength."

Graph-2: Sources of Stress among the Teachers in Kalaburagi District Overall
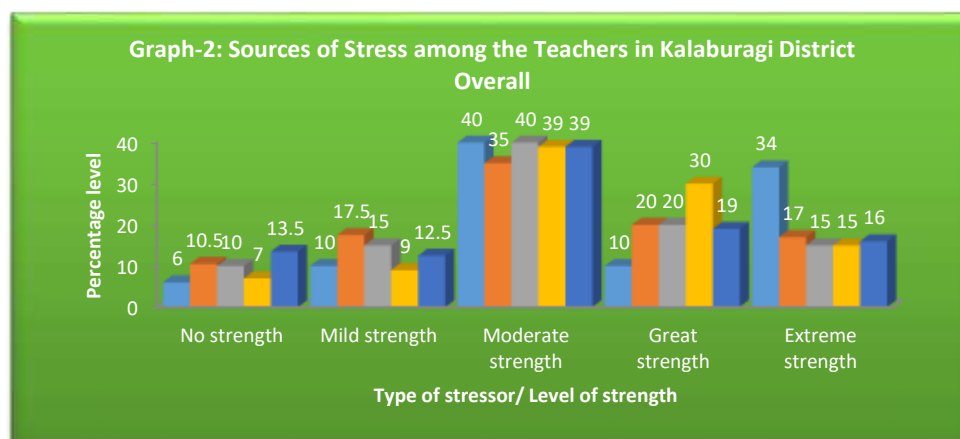
4. Discussion:

1) According to our research, secondary school teachers in the Raichur District are typically more vulnerable to mental health and wellness issues.

2) The results provide insight into the causes of stress experienced by Raichur District teachers and could inform future research aimed at creating intervention strategies to support teachers in maintaining or enhancing their mental health and wellness.

3) One further inference that can be drawn from the results is the pressing need to investigate the mental health state of Raichur District teachers more thoroughly, based on their self-reporting of psychological problems as documented in this study.

5. Conclusion

According to our research, secondary school teachers in the Raichur District are typically more vulnerable to mental health and wellness issues. The results provide insight into the causes of stress experienced by Raichur District teachers and could inform future research aimed at creating intervention strategies to support teachers in maintaining or enhancing their mental health and wellness. One further inference that can be drawn from the results is the pressing need to investigate the mental health state of Raichur District teachers more thoroughly, based on their self-reporting of psychological problems as documented in this study.

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A STUDY ON EMOTIONAL INTELLIGENCE AND ADJUSTMENT ABILITY AMONG UNDER GRADUATE STUDENTS OF KALABURAGI CITY

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Abstract

This article established the relationship between Emotional Intelligence and Adjustment among under graduate students. Emotional Intelligence has been measured by applying Mondal Emotional Intelligence Inventory consisted with 100 items and Adjustment was measured by Adjustment Inventory developed by Paramanik et. al. (2014). 200 samples were randomly selected from the Kalaburagi City of Karnataka State. The results revealed that Emotional Intelligence affects home, school and peer adjustment. Thus, student with high emotional intelligence can take the challenges of life and make successful adjustment in life.

Keywords: Emotional Intelligence, Adjustment, Undergraduate Students, Components

1.   Introduction:

Emotional intelligence refers to the ability to identify and manage one's own emotions, as well as the emotions of others. Emotional intelligence is generally said to include a few skills: namely emotional awareness, or the ability to identify and name one's own emotions; the ability to harness those emotions and apply them to tasks like thinking and problem solving; and the ability to manage emotions, which includes both regulating one's own emotions when necessary and helping others to do the same.

It is the psychological process of adapting in coping with, managing their problem, challenging tasks and requirements of daily life [1]. Psychologically, adjustment helps the organism to cope with the demands and pressures of the outside world as well as the needs, desires and conflicts experiences from within [2]. According to researchers, it is a lifelong process and a factor in everything that we do. Positive adjustment helps one to keep out basic impulses at tolerable levels, to believe in one's own abilities and to achieve desired goals and to face challenges, pressures and overcome it to accomplish their goals [3]. In contrast, negative adjustment in which it will lead to frustration [4].

Now-a-day, school education laid more emphasis on the learning of knowledge rather than on student's frame of mind. In classroom students feel nervous anxious, frustrated, depressed and abased when instructors ignore their emotions. If student does not receive guidance from school authorities, teachers or their parents, or timely concern from their peers or siblings, their unstable emotions may result in behavioural disorders. This type of disorders may affect students' academic achievements and life adjustment.

2. Objectives of the Study:
1) To study extent of relationship between emotional intelligence and adjustment of school adolescents.
2) To study extent of relationship between components of emotional intelligence and components of adjustment of Undergraduate students.

3. Hypotheses of the Study:

Following hypotheses has been framed to carry the research smoothly:

1) H1: There is no significant relationship between emotional intelligence and family adjustment
2) H2: There is no significant relationship between emotional intelligence and school adjustment
3) H3: There is no significant relationship between emotional intelligence and peer adjustment
4) H4: There is no significant relationship between emotional intelligence and total adjustment

4. Population and Sample:

All the First year degree standard students of Degree college students of Kalaburagi City, Karnataka, are the population of this research. Sample of 200 under graduate students were randomly selected from 10 Degree colleges out of which 5 from urban area and 5 from rural area of Kalaburagi city of Karnataka State.

5. Tools:

Emotional Intelligence Inventory (EII) developed by Mondal et. al (2001) and Adjustment Inventory (AI) developed by Pramanik et. al. [17] was used in this study. EII consisted with 100 items has four dimensions i.e. self awareness, self management, social awareness and relationship management with Cronbach's alpha 0.62 whereas

Adjustment Inventory consisted with three factors, namely family adjustment, school adjustment and peer adjustment having 67 items with Cronbach's alpha 0.84. High alpha co-efficient indicates that the instrument has a high internal consistency and the validity was ascertained by the choice of items which were subjected to internal consistency analysis (Cronbach's Alpha), which is an index of item homogeneity and an indication of construct validity. 302 subjects comprising of 176 rural and 126 urban students were given both Emotional Intelligence Inventory (EII) and Adjustment Inventory (AI). All subjects were allowed to respond for 90 minutes to 120 minutes for both the inventory. After the collection of data the responses of the participants were scored and after the final scoring the scores were analyzed in form of appropriate statistical tests.

6. Results and Discussion

6.1. H1: There is no significant relationship between emotional intelligence and family adjustment

Table 1: Pearson coefficient of correlation of different components of Adjustment (Family adjustment) and Emotional Intelligence

Component of Adjustment	Component of Emotional Intelligence				
	Self Awareness	Self Management	Social Awareness	Relationship Management	Emotional Intelligence
Family adjustment	0.053	0.674	0.485	0.872	0.852

Table 1 highlights the correlation between different dimensions of emotional intelligence and various dimensions of adjustments. It is observed from Table 2 that coefficient of correlation between family adjustment and emotional intelligence is 0.852 which is higher than that of table value (r = 0.148 at 0.01 level, df = 200). So, it is significant at 0.01 level. In the light of the above finding, H1 'there is

no significant relationship between emotional intelligence and family adjustment' is rejected. However, different dimensions of emotional intelligence are also significantly correlated with family adjustment except Self Awareness.

The obtained results are in line with the findings of studies reported by Farn et. al where they submitted that emotional intelligence is a significant predictor of school adjustment and family adjustment. The probable reason for the present findings might be due to the fact that emotional intelligence primarily concerns with managing of others emotions through social skills. This type skills are very essentials while adjusting with the family members.

6.2. H2: There is no significant relationship between emotional intelligence and school adjustment

Table 2: Pearson coefficient of correlation of different components of Adjustment (School adjustment) and Emotional Intelligence

Component of Adjustment	Component of Emotional Intelligence				
	Self Awareness	Self Management	Social Awareness	Relationship Management	Emotional Intelligence
School adjustment	0.483	0.666	0.754	0.487	0.672

It is observed from Table 2 that, coefficient of correlation between school adjustment and emotional intelligence is 0.672 which is higher than that of table value (r = 0.148 at 0.01 level, df = 200). So, it is significant at 0.01 level. The sub aspects of emotional intelligence are also strongly correlated with school adjustment. In the light of the above finding, H2'there is no significant relationship between emotional intelligence and school adjustment' is rejected. The obtained results are in line with the findings of studies reported by Farn et. al School is the miniature of society and hence to adjust with school social skills also mandatory.

6.3. H3: There is no significant relationship between emotional intelligence and peer adjustment

Table 3. Pearson coefficient of correlation of different components of Adjustment (Peer adjustment) and Emotional Intelligence

Component of Adjustment	Component of Emotional Intelligence				
	Self Awareness	Self Management	Social Awareness	Relationship Management	Emotional Intelligence
Peer adjustment	0.451	0.845	0.531	0.105	0.273

The data in Table 2 portrays the correlation between emotional intelligence and peer adjustment were found to be significantly correlated (r = 0.273, df = 300) at 0.01 level of significance. So, H3'there is no significant relationship between emotional intelligence and peer adjustment' is rejected. However, Relationship Management (r = 0.105) sub aspect did not correlated significantly with peer adjustment.

6.4. H4: There is no significant relationship between emotional intelligence and total adjustment

Table 4. Pearson coefficient of correlation of different components of Adjustment (Peer adjustment) and Emotional Intelligence

Component of Adjustment	Component of Emotional Intelligence				
	Self Awareness	Self Management	Social Awareness	Relationship Management	Emotional Intelligence
Total adjustment	0.626	0.720	0.456	0.727	0.875

The data in Table 2 portrays the correlation between emotional intelligence and overall adjustment were found to be significantly correlated (r = 0.875, df = 200) at 0.01 level of significance as a result of which H4'there is no significant relationship between emotional intelligence and total adjustment' is rejected. The finding of Ogoemeka also contradicts the present findings, that emotional intelligence is not a strong predictor of adjustment, that is to say that an individual can adjust properly without necessarily being emotionally intelligent. However, finding of our research supported the fact that emotional intelligence influence student's overall adjustment.

7. Conclusion:

Results of the present study demonstrate that there is significant relationship between emotional intelligence and adjustment even the sub-aspects of emotional intelligence and adjustment also had a significant correlation with each other except peer adjustment v/s Relationship Management and Family adjustment v/s Self Awareness. It means that emotional intelligence directly influences the home adjustment, school adjustment and peer adjustment among higher secondary students. Thus, the students having high emotional intelligence are well adjusted in their life. The education that we impart today focuses much on the cognitive aspect and we seldom give importance to the affective part. It has been accepted by all that education should help the student to solve the challenges of life and make successful adjustment in life. So this study is very much useful for the students who are unable to adjust in the environment and leads a stressful life, by enhancing their emotional intelligence they can come out of such problems. To develop emotional intelligence the individual should have control over his emotions. Several steps can be followed by the individual to have emotional control once control over emotions are achieved, the individual is automatically becomes emotionally intelligent.

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INFLUENCE OF EMOTIONAL INTELLIGENCE ON SOCIAL AND EMOTIONAL LEARNING AMONG STUDENTS IN HIGHER EDUCATION

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Abstract

Developing emotional intelligence (EI) has a profound impact on social and emotional learning (SEL) in higher education, shaping students' personal growth, academic success, relationships, and future professional skills. Emotional intelligence refers to the ability to understand and manage one's own emotions and to recognize and influence the emotions of others. Social and emotional learning in higher education involves teaching students the skills needed to manage emotions, set goals, demonstrate empathy, establish positive relationships, and make responsible decisions.

Emotional intelligence (EI), like self-esteem, the unconscious, and grit, is one of those rare psychological terms that has jumped the boundaries of the discipline and taken on a life of its own in the popular imagination. Although promoting EI through the use of social and emotional learning (SEL) programs is a promising avenue for raising not only intelligent but also socially competent and kind individuals, it's crucial that we approach this with thoughtfulness and care. As a consequence of what some might regard as blind enthusiasm for EI in educational policy and practice circles, the implementation of SEL has tended to ignore relevant theoretical issues regarding its conceptual clarity. It makes hasty assumptions about the impact of SEL on EI as a measurable psychological construct. This underlines the importance of a more thoughtful approach to the implementation of SEL programs, making the audience feel the weight of their role in this process.

Introduction:

Emotional intelligence is an essential skill for success in both personal and professional settings. Educators play an important role in helping students develop their emotional intelligence. One way to do this is by incorporating social and emotional learning (SEL) in your curriculum. In this blog post, we will explore the importance of emotional intelligence, the benefits of developing it in higher education, and practical ways to incorporate SEL in your academic and personal life.

Understanding Emotional Intelligence

Emotional intelligence refers to the ability to understand and manage emotions in oneself and others effectively.

It consists of five key components:

- Self-Awareness,
- Self-Regulation,
- Motivation,
- Empathy,
- Social skills.

Self-awareness is the ability to recognize and understand your emotions and how they impact your behaviour. Self-regulation is the ability to manage your emotions, thoughts, and behaviours effectively. Motivation is the drive to achieve personal and professional goals. Empathy is the ability to understand and share others' emotions and perspectives. Social skills refer to the ability to communicate effectively, resolve conflicts, and build positive relationships with others.

There is substantial evidence from hundreds of independent studies across various fields and sources supporting that SEL leads to a range of beneficial outcomes, such as improved social and emotional skills, academic performance, mental wellness, healthy behaviours, school climate and safety, and lifetime outcomes.

What is Social and Emotional Learning?

Social emotional learning (SEL) is a process that empowers students with the knowledge and skills necessary to manage emotional stress effectively, develop positive relationships with others, and make responsible decisions. Through SEL, students learn to understand and manage their emotions, which ultimately enhance their problem-solving abilities. By promoting self-awareness, self-regulation, motivation, empathy, and social skills, SEL helps students cultivate a healthy sense of self, which in turn leads to success in academics and personal life.

The Benefits of Emotional Intelligence in Higher Education

Research shows that emotional intelligence plays a crucial role in academic success and personal well-being. Students with high emotional intelligence tend to have better academic performance, higher graduation rates, and lower dropout rates. They are also less likely to experience stress, anxiety, and depression. Social and Emotional Intelligence is also crucial for developing positive relationships with peers, professors, and colleagues, which is essential for success in personal and professional life.

Emotional Intelligence Impacting Social and Emotional Learning In Higher Education:

1. **Enhanced Self-Recognition:**
- **Emotional Regulation:** Students who have developed their emotional intelligence are better able to identify their own emotions and how they influence their behaviour and thinking. A crucial component of SEL is improved emotional control, which is a result of this self-awareness.
- **Personal Growth:** Students can work on personal growth by identifying their emotional triggers and strengths. Resilience, self-assurance, and a positive outlook are all important aspects of social and emotional learning.

2. **Enhanced Social Awareness and Empathy**
- **Interpersonal Understanding:** Emotional intelligence creates empathy, the ability to comprehend and share the feelings of others. As a result, kids develop more social awareness—a fundamental SEL competency—and become more perceptive to the feelings and viewpoints of their peers, teachers, and co-workers.
- **Cultural Sensitivity:** Empathy helps students manage cultural differences and collaborate with others in different higher education environments, so improving inclusivity and cultural competence.

3. **Improved Relationship Skills**
- **Effective Communication**: Students that possess emotional intelligence are better able to interact both orally and nonverbally. This enhances their capacity to build wholesome, fulfilling relationships—a cornerstone of self-esteem education.
- **Conflict Resolution**: Students with higher emotional intelligence levels are better equipped to handle conflicts and tensions in a productive way because they have stronger conflict resolution skills. In academic environments, this promotes improved teamwork and collaboration.
- **Collaboration and Teamwork**: Building strong peer relationships, controlling group dynamics, and comprehending group dynamics are all skills that students who are working on

higher education projects and collaborative assignments need to develop in order to perform well as a team.

4. **Better Ability to Make Decisions and Solve Problems**
   - **Responsible Decision-Making**: A critical SEL ability, making more deliberate and responsible decisions, is facilitated by emotional intelligence. Pupils with high EI are more able to weigh the emotional implications of their choices, which helps them make more morally responsible decisions.
   - **Emotional Insight in Problem-Solving**: Students can approach challenges with greater clarity and objectivity if they have a better knowledge of both their own and other people's emotions. This enhances their capacity to tackle intricate issues in both personal and academic contexts, resulting in more fruitful outcomes in higher education settings.

5. **Stress Management and Emotional Resilience**
   - **Coping with Academic Pressure**: A student's ability to manage stress, anxiety, and academic pressure is aided by their emotional intelligence. Higher education may be a taxing experience. They can manage academic challenges while maintaining mental health thanks to their emotional resilience.
   - **Emotional Regulation**: Better emotional regulation brought about by EI development enables students to face obstacles in their academic careers, criticism, or disappointments with poise and optimism. This improves their ability to learn socially and emotionally.

6. **Increased Academic Performance**
   - **Focus and Concentration**: Emotionally intelligent students are better able to regulate emotions like boredom, concern, or irritation that can interfere with their ability to focus in class. Students with strong emotional intelligence scores are more able to maintain motivation and concentrate, which enhances their academic performance.
   - **Motivation and Goal Setting**: Pupils possessing emotional intelligence are more capable of staying motivated, setting and achieving realistic goals for their studies, and overcoming setbacks. This self-motivation is essential for success in higher education and is closely linked to SEL results.

7. **Development of Leadership Skills**
   - **Leadership Qualities**: The development of leadership is closely linked to emotional intelligence. Pupils possessing greater emotional intelligence (EI) are better equipped to inspire, counsel, and positively influence others. This leadership ability is the cornerstone of self-awareness, empathy, and effective communication, or SEL.
   - **Team Leadership:** Because they can manage group dynamics well, students with emotional intelligence make stronger leaders in group projects and student organisations. Leaders with high emotional intelligence are able to manage group dynamics and results without losing their emotional composure.

8. **Positive Mental Health and Well-being**
   - **Emotional Balance**: Acquiring emotional intelligence (EI) helps students maintain emotional balance, which is essential for mental well-being. Higher education social and emotional learning programs that emphasize emotional intelligence also promote improved self-care, reduced stress, and increased emotional well-being.

- **Reduced Anxiety and Depression**: Higher emotional intelligence in students relates to lower levels of anxiety and hopelessness because they are better equipped to manage emotional challenges and seek help when needed.

9. **Professional and Career Preparedness**
   - **Workplace Readiness**: Since emotional intelligence fosters soft skills like communication, teamwork, adaptability, and conflict resolution, students who possess it are more prepared for the workforce. These skills are essential to SEL and required for professional success in the workplace.
   - **Networking and Professional Relationships**: Students with high emotional intelligence have a stronger professional network and do better in internships, interviews, and entry-level jobs because they are more adept at perceiving and negotiating social circumstances.

10. **Fostering a Positive Learning Environment**
   - **Peer Support and Collaboration**: An environment that is more encouraging and helpful for learning is produced when students work together to increase their emotional intelligence. Peer cooperation, open communication, and respect are all facilitated by emotional intelligence, which enhances the learning environment.
   - **Instructor-Student Relationships**: Gaining emotional intelligence (EI) makes it easier for children to communicate with teachers and builds strong bonds that support and mentor students academically. The comprehensive social and emotional growth that SEL in higher education advocates is centered on these connections.

Conclusion:

Developing emotional intelligence significantly enhances social and emotional learning in higher education by fostering self-awareness, empathy, resilience, better interpersonal relationships, and responsible decision-making. It supports academic success, mental well-being, leadership skills, and career preparedness. By integrating EI into social and emotional learning frameworks, higher education institutions help students grow into well-rounded, emotionally balanced, and socially competent individuals capable of navigating both personal and professional challenges.

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DIFFERENCE BETWEEN OPEN UNIVERSITY AND DISTANCE EDUCATION

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Abstract

The Open University (OU) is a distance education and research institution in the United Kingdom. It offers undergraduate and postgraduate degrees and professional qualifications with a range of flexible study options, including online courses and training.

The Open School is renowned for its commitment to providing accessible education to a variety of students, including those who do not have the opportunity to attend traditional universities. It is one of the largest universities in England, with more than 250,000 students studying.

Distance education refers to the provision of educational content and instruction through digital or online tools instead of the classroom environment. This allows students to learn on their own time and hours and can include different formats such as online courses, written courses, and blended learning.

Similarities between the Open University and distance learning:

1. Both the Open University and distance education offer flexibility in when and where students study.
2. Both are usually selfpaced and allow students to complete assignments on the ir own.
3. Both rely on technology and online services to deliver learning materials and facilitate communication between students and teachers.
4. Both are good options for people who can't attend traditional college courses (such as full-time workers or those with other jobs).
5. Both require selfmotivation and discipline to be successful. 6. Both Open University and distance education offer a variety of courses and programmes.
6. Both offer support services such as online tutoring and counseling.
7. Both open schools and distance education are considered nonacademic programs.
8. Both offer some form of online assessment, quizzes, and quizzes.

The Open University and distance education programs aim to improve social or educational inequality by giving equal opportunities to those who cannot complete their education. This helps students seize opportunities lost in the past and gain knowledge and skills. The term open education describes policies and practices that allow access to education with as few barriers as possible.

Introduction:

Open school refers to a private type of education, usually a public school, that allows students to attend classes and programs without restrictions on traditional admissions such as high school diplomas or test scores. Distance education refers to the provision of educational content and instruction through digital means such as online courses, correspondence courses and teleconferences. The Open University can be considered a form of distance education, but not all distance learning is done by the Open University.

Open University	Distance Education
Offers degree programs through distance learning	Offers a variety of educational options, including degree programs, through distance learning
Typically has specific start and end dates for courses	Allows for more flexibility in terms of course start and end dates
Often has set schedules for assignments and exams	Allows for more self-paced learning
May require students to attend oncampus sessions or residencies	Typically does not require students to attend on-campus sessions
Often has a specific enrollment period for courses	Allows for enrollment at any time
Often has a fixed curriculum	Allows for more customization in terms of course selection
Often has a specific admission process	Has more flexible admission process, or none at all

Open University:

Distance education may not be recognized. Courses: Flexibility in Open University course options. Open universities and distance education are not the same thing. Both Open Universities and Advanced Universities offer online courses, but they differ in their openness; while courses generally follow a fixed curriculum, distance Open universities are often recognized by national or regional accreditation, while learning programs will suit candidates better. Basically, the Open University prefers to accept every student without any age limit and without any prior education.

Open distance learning (ODL) systems are systems that do not require teachers and students to be in the same place or at the same time, and are flexible in how and when teaching and learning takes place, including the admissions process. Sacrificing the required quality. IGNOU is one of the largest open universities in India and has around 228 IGNOU courses available for students in distance education mode.

Distance Education:

Distance education is "the process of creating and delivering learning opportunities when materials and students are separated by time, distance, or both." In other words, distance education is about creating equal opportunity for students that is best for them. . The learning process is a good value.

Distance education is 100% guaranteed. However, for your distance education to become legal, you must verify that your institution has UGC-DEB approval.

Founded in 1985, Indira Gandhi National Open University is the world's largest open university and India's highest distance university. IGNOU is popular for its quality education that is accredited and recognized by the government.

Features of Open University:

The Open University has the following features:
•   It follows the policy of open education with little or no access restrictions.
•   No experience, resume or letter of recommendation required.
•Relaxation course, for example a 3-year master's course can be completed in 6 years.
•   A great way to get higher education at an affordable price.
•   Features suitable for distance learning

Features of distance learning are:
- There is no direct interaction (face to face) between teachers and students.
- Time and space available for study.
- Ease in course selection
- Use of different ICTs to deliver courses.
- This course is recognized by some institutions or organizations. machine.
- The influence of schools in planning, preparing the curriculum and providing services to students.

Difference between Open University and Distance Education:

1. **Accreditation:**
   While the Open University is usually accredited by a national or regional accreditation body, distance learning programs may not be accredited.

2. **Courses:**
   Open University courses generally follow a fixed curriculum, while distance learning can offer greater flexibility in course selection.

3. **Delivery mode**:
   Open University courses are usually delivered online, while distance learning courses may also include written or other non-online courses.

4. **Student Support**:
   Open University courses often offer more advanced student support services, such as tutoring and academic support, than distance courses.

6. **Discussion:**
   Open University courses generally involve more interaction with instructors and students than distance courses.

5. **Access:**
   Open University courses are generally open to anyone who meets the requirements, while distance learning programs have stricter rules.

6. **Cost:**
   Open University courses can be more expensive than distance courses due to the additional support and resources the university provides.

A brief description of the Open University:

The Open University (OU) is a distance education and research institution in the United Kingdom. It offers undergraduate and postgraduate degrees and professional qualifications with a range of flexible study options, including online courses and training.

The Open School is renowned for its commitment to providing accessible education to a variety of students, including those who do not have the opportunity to attend traditional universities. It is one of the largest universities in England, with more than 250,000 students studying.

Advantages of Open University:

1. **Flexibility:**
   Open School offers flexible programs so students can learn at their own pace and time.

2. **Affordability:**
   Tuition fees at open universities are generally lower than traditional universities.

3. **Availability:**

The Open University provides educational opportunities to people who cannot attend traditional universities, such as those from rural areas or people with disabilities.

4. **Course Diversity:**

The Open University offers a wide range of courses and courses allowing students to study a variety of subjects.

5. **Online learning:**

The Open University often has online learning options; this can be a great way to learn and study remotely.

6. **Credit transfer:**

The Open University often accepts loans from other institutions, which can help students save time and money.

7. **Self-learning:**

Open universities generally rely on self-learning, so students will be well prepared for self-learning in their careers.

Disadvantages of Open University:

1. **Limited interaction:**

Open universities often have limited face-to-face interaction with teachers and classmates, making it difficult to build relationships and gain support.

2. **Lack of standards:**

Open universities generally have lower standards than traditional universities; This can be difficult for some students who need extra guidance and support.

3. **Limited campus life:**

Open universities often do not have a traditional campus, which means access to campus resources and events is limited.

4. **Limited support:**

The Open University generally provides limited support such as advice, tutoring and careers support.

5. **Social restrictions:**

Social contacts at the Open University are often limited and this can be an important part of higher education for many students.

6. **Limited accreditation:**

Some open colleges may not be accredited or have limited accreditation; this may impact the student's ability to transfer credits or find employment.

7. **Fewer apprenticeships:**

Open universities often have fewer apprenticeships than traditional universities, which can make it harder for students to acquire past skills and knowledge.

Brief definition of distance education:

Distance education refers to the provision of educational content and instruction through digital or online tools instead of the classroom environment. This allows students to learn on their own time and hours and can include different formats such as online courses, written courses, and blended learning.

Advantages of distance learning:

1. **Flexibility:**

   Distance learning allows students to study at their own time and place.

2. **Availability:**

   Distance education courses are often available to underserved students who live in rural areas or who may not be able to attend regular classes on campus.

3. **Affordability:**

   Distance learning programs tend to be more expensive than traditional oncampus programs because tuition fees are lower and there are no housing or transportation costs.

4. **Various courses:**

   Distance education offers a variety of courses, from certificates to undergraduate and graduate degrees, to meet the diverse needs of students.

5. **Learning technology:**

   Distance education often involves the use of technology such as online classroom management, video conferencing, and digital resources to enhance learning.

6. **Communicate with peers and teachers:**

   Distance learning often involves online discussion and collaboration, allowing students to interact with peers and teachers.

7. **Career Development:**

   Distance learning programs can be an easy way for working adults to advance their careers by acquiring additional skills or certifications.

Disadvantages of Distance Education:

1. **Less interaction:**

   Distance learning can limit face-to-face interaction with teachers and classmates, making it harder to build relationships and get feedback.

2. **Isolation:**

   Distance learning can be a lonely experience, which can be isolating for some students.

3. **Difficulty focusing:**

   Without the structure and relationships of a traditional school curriculum, some distance learning students may struggle to stay motivated to complete courses.

4. **Challenges:**

   Distance education programs rely heavily on technology, which can create problems for students who do not have good access to the internet or have trouble navigating online platforms.

5. **Limited access to resources:**

   Distance education students may not have access to the same resources as oncampus students, such as libraries, laboratories, and study services.

6. **Informal opportunities:**

   Distance education students cannot study. Accreditation: Not all distance learning programs are accredited, but there are opportunities to meet and network with other students and professionals in your area.

7. **Limited accreditation:**

Few employers will doubt a diploma obtained through distance learning.

Similarities between the Open University and distance learning:

9. Both the Open University and distance education offer flexibility in when and where students study.
10. Both are usually selfpaced and allow students to complete assignments on the ir own.
11. Both rely on technology and online services to deliver learning materials and facilitate communication between students and teachers.
12. Both are good options for people who can't attend traditional college courses (such as full-time workers or those with other jobs).
13. Both require selfmotivation and discipline to be successful. 6. Both Open University and distance education offer a variety of courses and programmes.
14. Both offer support services such as online tutoring and counseling.
15. Both open schools and distance education are considered nonacademic programs.
16. Both offer some form of online assessment, quizzes, and quizzes.

Conclusion:

The Open University and distance education programs aim to improve social or educational inequality by giving equal opportunities to those who cannot complete their education. This helps students seize opportunities lost in the past and gain knowledge and skills. The term open education describes policies and practices that allow access to education with as few barriers as possible.

Distance education is about the separation of teachers and students. Open learning is different from distance learning but more specific. The future is open. Start your future with the Open University. We have been experts in distance education for over 50 years. If you are applying for a government job, a degree obtained from an online or open distance learning (ODL) format is valid.

If you are applying for a job in the central government, you should know that you will have to take and clear the entrance exam. Listen; put your education into your life. International recognition. Degrees awarded by the Open University are comparable to degrees awarded by other UK universities. In fact, many employers and organizations around the world employ Open University graduates with the understanding that an Open University degree is the same as a degree from any institution in the UK.

There is no limit to the hours self-funding students can work, but doing too much paid work while studying is not recommended. All full-time students are required to study at least 37 hours per week.

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THEME 4

THEME - 4

STUDY OF VALUES OF SECONDARY SCHOOL STUDENTS IN RELATION TO MODERNIZATION

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Abstract

The future of any nation depends on its children. Values play an important role in shaping the character and personality of the children. The present study attempts to study the values of secondary school students in relation to modernization. The main purpose of the study is to compare the values of secondary school boys and girls, rural and urban students and government and non-government secondary school students. In this study normative survey method was employed. All secondary school students of Shikaripura taluk constituted the population of the study. Random sampling technique was used to select a total number of 320 secondary school students from the government and non-government secondary schools of Shikaripura taluk. Mean, S.D., 't' test were used for the statistical analysis. The findings revealed that all the secondary school students had average level of values. They preferred social values most while religious value was least preferred by the students. Secondary school students of rural and urban area were found to differ significantly in the hedonistic, family prestige and health values of government and non-government secondary school students. Social, family prestige and health values of the students while the modernization did not put any significant influence on the values of the students.

Keywords: Values, Secondary School Students, technological advancements and Modernization

India is a country of values. Values are guiding stars which guide the path of the human being to choose the right alternative. Value means something which has a price, something precious, dear and worthwhile, hence something one is ready to suffer and sacrifice for. Values are a set of principles or standards of behaviour. According to Davidov, Schmidt and Schwartz (2008) values are defined "as deeply rooted, abstract motivations that guide, justify or explain attitudes, norms, opinions and actions". In the words of Surinder (2012), "value is an intrinsic truth. It is an essential norm and governs the moral universe of man". Values play the supreme role in the making of the individual, society as well as a nation. Behaviour and conduct of an individual largely depends on his values. Values shape his character and personality. Values form the central pole around which people organize their desire and ambitions and fashion their idioms of life. Values affect the feelings, emotions, thoughts, and attitude and in this way influence the decisions and behaviour of the individual. Values play an important role in the motivation of a person's behaviour (Indira, K., 2009). Students, especially secondary school students fall in that period of age which is characterized with lots of conflicts. At such time, they should be taught what is right and good for them.

Purpose of the study

The purpose of this study is to compare the values of secondary school students in relation to their gender, area, type of school, with modernization.

Objectives of the study

Following objectives have been framed to achieve the purpose of the study:

   1. To study the values of secondary school students.

   2. To compare the values of secondary school students in relation to their gender.

   3. To compare the values of secondary school students in relation to their area.

4. To compare the values of secondary school students in relation to type of school.

5. To compare the values of secondary school students in relation to their modernization.

Hypotheses of the study

Following hypotheses have been formulated in order to achieve the objectives of the study:

1. There is no significant difference in the values of secondary school students in relation to their area.

2. There is no significant difference in the values of secondary school students in relation to type of school.

3. There is no significant difference in the values of secondary school students in relation to their modernization.

Limitations of the study

The present study is limited as follows: 1. The study is confined to the Shikaripura thaluk of Shivamogga District. 2. The study is delimited to the secondary school students only. 3. The study includes both boys and girls. 4. The students of government and non-government secondary schools have been included in the present study.

Methodology

The present study is dealing with the investigation of values of secondary school students in relation to gender, area, type of school, and modernization. The researcher has employed normative survey method. It attempts to describe and interpret practices, processes, trends, effects, attitudes and beliefs etc. of the present phenomenon. Hence, this method has been found to be most suitable for present study.

Population of the study

All secondary school students of Shikaripura thaluk constituted the population of the present study. Sample and sampling procedure random sampling technique has been adopted to select the representative sample from the population. The investigator selected 5 government and 5 non-government secondary schools randomly. 32 students from each secondary school were selected randomly. In this way a total number of 320 secondary school students were selected. The sample frame work is given in the table below

Table 1: Sampling Framework

Area	Type of School	Gender	Selected Sample	Total Sample
Rural	Government	Boys	40	80
		Girls	40	
	Non- Government	Boys	40	80
		Girls	40	
Urban	Government	Boys	40	80
		Girls	40	
	Non- Government	Boys	40	80
		Girls	40	
	Total		320	320

Variables

The present study involves two kinds of variables, which are stated as under:

Dependent Variable

In the present study, the dependent variable is values, which is measured by Personal Value Questionnaire developed by Dr. (Mrs.) G.P. Sherry and Dr. R.P. Verma.

Independent Variable

Modernization was the independent variables of the study. Modernization has been measured by Comprehensive Modernization Inventory developed by Dr. S.P. Ahluwalia and Dr. A.K. Kalia. Tools used.

Statistical analysis

Mean, S.D. and 't' test have been used for the statistical analysis.

Results and discussion

Table 2: Mean and S.D. of the Values of Secondary School Students

Variable		N	Mean	S.D
Values of Secondary School Students	Religious Value	320	47.89	11.47
	Social Value	320	53.49	11.80
	Democratic Value	320	49.63	9.92
	Aesthetic Value	320	49.79	10.74
	Economic Value	320	50.72	9.56
	Knowledge Value	320	49.92	9.68
	Hedonistic Value	320	51.92	10.63
	Power Value	320	50.95	11.09
	Family Prestige Value	320	50.55	10.40
	Health Value	320	49.93	10.28

The above table shows the mean and S.D. of the ten values of the secondary school students. The mean score of religious, social, democratic, aesthetic, economic, knowledge, hedonistic, power, family prestige and health values are 47.89, 53.49, 49.63, 49.79, 50.72, 49.92, 51.92, 50.95, 50.55 and 49.93 respectively. These mean scores indicate that secondary school students have average level of all the ten values. It is clear from the above table that secondary school students have highest social value while they have least religious value. They have shown equal level of democratic, aesthetic, knowledge and health value. In case of economic, power and family prestige value, they have shown almost similar level.

Table 3: Comparison of the Values of Secondary School Students in relation to their Area

Values	Rural N=160		Urban N=160		't' Values
	Mean.	S.D	Mean.	S.D	
Religious Value	49.65	10.02	46.13	12.57	2.768**
Social Value	55.39	12.31	51.58	11.02	2.916**
Democratic Value	49.13	10.06	50.13	9.82	0.895
Aesthetic Value	50.22	10.55	49.37	10.97	0.708
Economic Value	49.50	9.69	51.94	9.33	2.293*
Knowledge Value	49.75	9.71	50.09	9.72	0.310

Hedonistic Value	50.14	10.30	53.71	10.73	3.032**
Power Value	53.45	11.37	48.45	10.29	4.126**
Family Prestige Value	52.24	11.08	48.86	9.46	2.939**
Health Value	51.63	10.62	48.23	9.69	2.984**

** = Significant at 0.01 Level of Significance

 * = Significant at 0.05 Level of Significance

The above table shows the t-values to compare the ten values of secondary school students in relation to their area. The obtained t-values for religious (t = 2.768), social (t = 2.916), hedonistic (t = 3.032), power (t = 4.126), family prestige (t = 2.939) and health value (t = 2.984) have been found significant at 0.01 level of significance at df 318. It shows that there is a highly significant difference in the religious, social, hedonistic, power, family prestige and health value of secondary school students of rural and urban area. The mean values show that secondary school students of rural area have higher religious, social, power, family prestige and health value as compared to secondary school students of urban area while the students of urban area have more hedonistic value than their rural counterparts. The t-value for economic value (t = 2.293) has been found significant at 0.05 level of significance at df 318. It shows that secondary school students of rural and urban area differ significantly in their economic value. The mean values show that secondary school students of urban area have higher economic value as compared to secondary school students of rural area. On the other hand, the t-values for democratic (t = 0.895), aesthetic (t = 0.708) and knowledge value (t = 0.310) have not been found significant even at 0.05 level of significance. It means that there is no significant difference in the democratic, aesthetic and knowledge value of secondary school students of rural and urban area.

Table 4: Comparison of the Values of Secondary School Students in relation to Type of School

Values	Government (N=160)		Non-Government (N=160)		't' Value
	Mean	S.D	Mean	S.D	
Religious Value	47.75	11.01	48.02	11.97	0.197
Social Value	53.68	12.07	53.29	10.91	0.298
Democratic Value	48.53	9.58	50.66	10.21	1.875
Aesthetic Value	49.16	10.42	50.43	11.08	1.063
Economic Value	51.29	9.16	50.15	9.96	1.068
Knowledge Value	48.92	9.07	50.92	10.23	1.855
Hedonistic Value	50.37	9.26	53.47	11.70	2.630**
Power Value	49.89	10.42	52.01	11.70	1.711
Family Prestige Value	53.35	10.34	47.75	9.76	4.974**
Health Value	51.49	10.72	48.37	9.62	2.737**

*** = Significant at 0.01 Level of Significance*

The above table shows the t-values to compare the ten values of secondary school students in relation to type of school. The obtained t-values for hedonistic (t = 2.630), family prestige (t = 4.974) and health value (t = 2.737) have been found significant at 0.01 level of significance at df 318. It shows that there is a highly significant difference in the hedonistic, family prestige and health value of government and non-government secondary school students. The mean values show that non-government secondary school students have higher hedonistic values as compared to their government counterparts while government secondary school students have higher family prestige and health value as compared to non-government secondary school students.

The t-value for religious (t = 0.197), social (t = 0.298), democratic (t = 1.875), aesthetic (t = 1.063),

economic (t = 1.068), knowledge (t = 1.855) and power value (t = 1.711) have not been found significant even at 0.05 level of significance. It means that there is no significant difference in the religious, social, democratic, aesthetic, economic, knowledge and power values of government and non-government secondary school students.

Table 5: Comparison of the Values of High and Low Modernized Students

Values	High Modernized (N=101)		Low Modernized (N=11)		't' Values
	Mean	S.D.	Mean	S.D.	
Religious Value	49.65	10.94	46.70	11.86	0.842
Social Value	52.96	14.09	56.32	10.93	0.765
Democratic Value	48.97	8.81	44.83	8.40	1.485
Aesthetic Value	50.27	10.11	51.61	7.03	0.427
Economic Value	51.87	10.32	49.29	3.56	0.819
Knowledge Value	50.77	9.83	52.25	8.03	0.480
Hedonistic Value	54.29	10.15	48.46	8.18	1.996*
Power Value	51.61	11.00	51.07	9.08	0.156
Family Prestige Value	51.19	10.94	55.60	12.17	1.256
Health Value	51.20	10.98	48.91	6.94	0.673

= Significant at 0.05 Level of Significance

The above table shows the t-values to compare the ten values of high and low modernized students. The obtained t-value for hedonistic value (t = 1.996) has been found significant at 0.01 level of significance at df 110. It shows that high and low modernized students differ significantly in hedonistic value. The mean values suggest that highly modernized students have higher hedonistic values as compared to low modernized students.

On the other hand, t-values for religious (t = 0.842), social (t = 0.765), democratic (t = 1.485), aesthetic (t = 0.427), economic (t = 0.819), knowledge (t = 0.480), power (t = 0.156), family prestige (t = 1.256) and health value (t= 0.673) have not been found significant even at 0.05 level of significance. It means that there is no significant difference in the religious, social, democratic, aesthetic, economic, knowledge, power, family prestige and health value of high and low modernized students.

Table 6: Comparison of the Values of High and Average Modernized Students

Values	High Modernized (N=101)		Average Modernized (N=208)		't' Values
	Mean	S.D.	Mean	S.D.	
Religious Value	49.65	10.94	47.09	11.68	1.840
Social Value	52.96	14.09	53.59	10.63	0.442
Democratic Value	48.97	8.81	50.21	10.46	1.018
Aesthetic Value	50.27	10.11	49.47	11.23	0.606
Economic Value	51.87	10.32	50.24	9.39	1.382
Knowledge Value	50.77	9.83	49.38	9.71	1.176
Hedonistic Value	54.29	10.15	51.49	10.94	1.386
Power Value	51.61	11.00	50.63	11.29	0.724
Family Prestige Value	51.19	10.94	49.98	10.02	0.965
Health Value	51.20	10.98	49.39	10.07	1.450

The above table shows the t-values to compare the ten values of high and average modernized

students. The obtained t-value for religious (t = 1.840), social (t = 0.442), democratic (t = 1.018), aesthetic (t = 0.606), economic (t = 1.382), knowledge (t = 1.176), hedonistic (t = 1.386), power (t = 0.724), family prestige (t = 0.965) and health value (t= 1.450) have not been found significant even at 0.05 level of significance. It means that there is no significant difference in the religious, social, democratic, aesthetic, economic, knowledge, hedonistic, power, family prestige and health value of high and average modernized students.

The above table shows the t-values to compare the ten values of average and low modernized students. The obtained t-value for religious (t = 0.109), social (t = 0.826), democratic (t = 1.672), aesthetic (t = 0.625), economic (t = 0.333), knowledge (t = 0.962), hedonistic (t = 1.205), power (t = 0.128), family prestige (t = 1.794) and health value (t= 0.148) have not been found significant even at 0.05 level of significance. It means that there is no significant difference in the religious, social, democratic, aesthetic, economic, knowledge, hedonistic, power, family prestige and health value of average and low modernized students

Table 7: Comparison of the Values of Average and Low Modernized Students

Values	Average Modernized (N=208)		Low Modernized (N=11)		't' Values
	Mean	S.D.	Mean	S.D.	
Religious Value	47.09	11.68	46.70	11.86	0.109
Social Value	53.59	10.63	56.32	10.93	0.826
Democratic Value	50.21	10.46	44.83	8.40	1.672
Aesthetic Value	49.47	11.23	51.61	7.03	0.625
Economic Value	50.24	9.39	49.29	3.56	0.333
Knowledge Value	49.38	9.71	52.25	8.03	0.962
Hedonistic Value	51.49	10.94	48.46	8.18	1.205
Power Value	50.63	11.29	51.07	9.08	0.128
Family Prestige Value	49.98	10.02	55.60	12.17	1.794
Health Value	49.39	10.07	48.91	6.94	0.148

Conclusions

On the basis of the above interpretation, following conclusions can be drawn:

1. Secondary school students have average level of all the values. They preferred social value highest while religious value was preferred least.

2. Significant difference has been found in the religious, aesthetic, economic, hedonistic, power, family prestige and health values of the secondary school boys and girls. Secondary school boys have higher religious, aesthetic, hedonistic, power, family prestige and health values while secondary school girls have higher economic value.

3. Secondary school students of rural and urban area have been found to differ significantly in religious, social, economic, hedonistic, power, family prestige and health values. Rural students have higher religious, social, hedonistic, power, family prestige and health values whereas urban students have higher economic value.

4. There has been found a significant difference in the hedonistic, family prestige and health values of government and non-government secondary school students. Government secondary school students have higher family prestige and health values while non-government secondary school students have higher hedonistic values.

5. Significant difference has been found in the religious, social, family prestige and health values of the secondary school students of high and low socio-economic status. Students of high socio-economic status have higher religious, social and health values while the students of low socio-economic status have higher family prestige value.

6. Secondary school students of high and average socio-economic status have been found to differ significantly in religious, social, knowledge and health values. Students of high socio-economic status have higher religious, social, knowledge and health values.

7. High and low modernized students have been found to differ in hedonistic value only. Highly modernized students have higher hedonistic value.

8. Significant difference has not been found in the values of high and average modernized students as well as average and low modernized students.

Educational implications

The findings of this study may definitely contribute in the society. As values are the guiding principles of our life, it becomes necessary to pay proper attention towards the inculcation of the values in the children since birth. Parents should be a good model for their children for the practices of the values. In this study, it was observed that students possess average level of all the values. They should be provided such curriculum which contains the teachings of idealistic, humanistic, democratic philosophers. Besides this, essence of all the religions should be provided to the students in the form of moral values so that they may not become religious fantasists. Value education and moral education should be imparted to the students at each level, even at higher level. The school should balance the traditional and modern values so that students can adapt themselves according to the need of the times as well as be connected with their own traditional values. Parents, teachers and counselors should pay their attention to those factors which may create value conflict in the students.

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LEADERSHIP BEHAVIOUR AMONG STUDENT TEACHERS (B.ED. TRAINEES)

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Abstract

Education is a noble calling that entails both challenges and responsibilities. One of the main aims of education is to produce good leaders. Strong accountable leadership is always a hallmark of successful individuals. It is a known fact that, the development of a society depends on its directive leaders. A leader is one who guides, organizes, directs and co-ordinates the society. Leadership is the ability to persuade others to seek defined objectives enthusiastically.

Adequacy of leadership is very material for the students of higher education. Because, all B.Ed. trainees need leadership qualities and the related skills are needed virtually in all areas. It is the human factor, which binds a group together and motivates it towards the goals. To be effective leaders, they must bring the core principles of quality leadership to their decision making and interaction with others. The emotional component of leadership requires the ability to perceive emotions, facilitate emotions in thought and understand and manage emotions. Leaders possessing these abilities are considered emotionally intelligence. Because intelligently governed emotion play a significant role in directing and shaping one's leadership behaviour and personality.

The B.Ed. trainees with ample leadership behaviour can lead anything successfully. The present scenario necessitates the effective intelligent leaders. Being very much inspired by the above discussion, the investigator has prepared her mind to study the leadership behaviour of B.Ed. trainees.

Therefore, the primary goal of this study is to assess the leadership qualities of Student Teachers (B.Ed. Trainees). The secondary goal is to aid in the development of programs that promote leadership quality among Student Teachers.

Keywords: Leadership, Behaviour, Student Teachers

Introduction:

Teachers are leaders all day. They lead by example in the way they act, speak, and behave. They lead their students through challenging activities and rigorous learning. Then, they take on additional teacher leadership roles inside and outside the classroom. Activities, events, and extracurricular programs are what build positive school culture and often require additional leadership support from teachers. Endless academic and social opportunities for students within schools benefit from teacher initiative and leadership capabilities. Teacher Education institutes build versatile teacher leaders, who are prepared to take on extra leadership and understand the importance of it.

Objective of the Study:

- To find out the social leader characteristics among student teachers involve in prayer talk programme.
- To find out the personal leader characteristics among student teachers involve in prayer talk programme.

Methodology adopted:

Kumadvathi College of Education is a Teacher Training College, here following so many methods to develop leadership quality among the Student teachers. On those methods Prayer talk programme is also one.

Prayer talk programme is the activity for student teachers. In this activity 3-4 minute duration will be provided for the student teachers to express their thoughts regarding the days special, special personalities, special occasions like that. Student teachers previously prepared to speak in prayer programme under the guidance of teacher educator.

Steps following in prayer talk programme :
- Choosing the topic suitable to the day that wants to speak.
- Deciding the day for prayer talk.
- Collecting the information.
- Arrange and concise the information
- Practicing individually
- Practicing under the guidance of mentor.
- Re-practicing as per the feedback of mentor.
- Speaking in front of peer group with teacher educators

Post prayer talk session feedback is collected here for the research article.

A Google form Survey method was used for the present study for collecting necessary data. The Questionnaire consisted of seventeen items related to the aspects of social and personality characters of student teachers. The investigator sent the Google forms to the Student teachers of Kumadvathi College of Education, Shikariura and collected the information.

Sample Selected for the Study:

The Sample consists of my study is 78 Student teachers of Kumadvathi College of Education, Shikariura.

Tool of the study:

Google form Questionnaire developed by the investigator was used for collecting data.

Statistical technique:

The obtained data was analysed by using appropriate statistical techniques like Percentages.

Findings of the study:

Social leader characteristics among student teachers involve in prayer talk programme:

Sl. No.	Questions	Strongly agree	Agree	Neither Agree or Disagree	Disagree	Strongly disagree
1	Have you built integrity among your team by engaging in a prayer program	37.18	62.82	0	0	0
2	Did the prayer program help you develop effective communication skills?	41.03	58.97	0	0	0

3	Did the prayer program help you understand your strengths and weaknesses?	42.31	57.69	0	0	0
4	Did the prayer program help you develop decision-making skills?	39.74	60.26	0	0	0
5	Does a prayer program help you to develop a leadership character?	51.28	48.72	0	0	0
6	Is it because of the prayer program that you feel confident speaking in a group of members?	55.13	44.87	0	0	0
7	Has the prayer program encouraged you to develop creative thinking?	30.77	69.23	0	0	0
8	Any peer group you have can inspire you to be an effective leader?	35.90	64.10	0	0	0
9	Has the prayer program helped you gain respect?	48.72	51.28	0	0	0

Social leader characteristics among student teachers involve in prayer talk programme
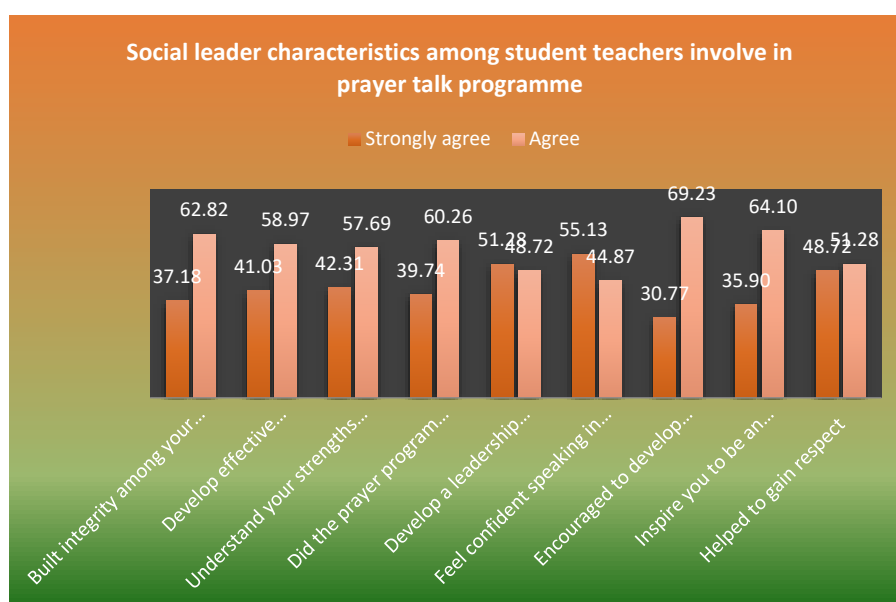
- 62.82% of the student teachers Agree that they built integrity among their team by engaging in a prayer program
- 58.97% of the of the student teachers Agree that they developed effective communication skills through prayer talk.
- 57.69% of the of the student teachers Agree that prayer program helped them to understand their strengths and weaknesses.
- 60.26% of the student teachers Agree that prayer program helped them to develop decision-making skills.
- 51.28% of the student teachers strongly agree that prayer program helped them to develop leadership character.

- 55.13% of the student teachers strongly agree that prayer program feels them to confident speaking in a group of members.
- 69.23% of the student teachers Agree that prayer program encouraged them to develop creative thinking.
- 64.10% of the student teachers Agree that prayer program inspire them to be an effective leader.
- 51.28% of the student teachers Agree that prayer program helped them to gain respect in the team.

Personal leader characteristics among student teachers involve in prayer talk programme:

Sl. No.	Questions	Strongly agree	Agree	Neither Agree or	Disagree	Strongly disagree
1	Did the prayer program help you develop learning agility?	43.59	56.41	0	0	0
2	Does the prayer program help you develop courage?	53.85	46.15	0	0	0
3	Does a prayer program help you develop gratitude?	43.59	56.41	0	0	0
4	Has the prayer program helped you to develop decisiveness?	34.62	65.38	0	0	0
5	Has the prayer program helped you to develop the quality of an adaptive attitude?	37.18	62.82	0	0	0
6	Has the prayer program helped you develop the character of inspiration and enthusiasm?	50.00	50.00	0	0	0
7	Has the prayer program helped you to develop humility?	44.87	55.13	0	0	0
8	A prayer program will help you develop strategic thinking?	46.15	53.85	0	0	0

Personal leader characteristics among student teachers involve in prayer talk programme
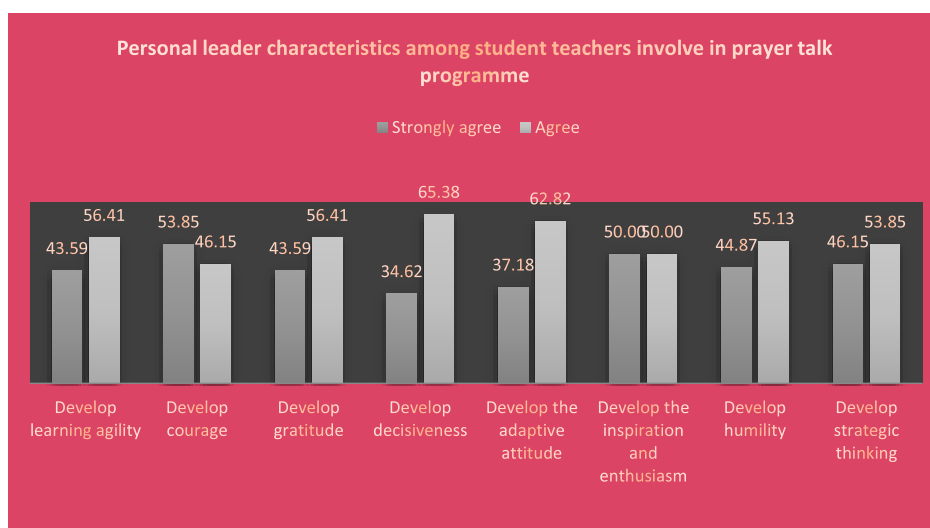
- 56.41% of the student teachers Agree that prayer program helped them to develop learning agility.
- 53.85% of the student teachers strongly agree that prayer program helped them to develop courage.
- 56.41% of the student teachers strongly agree that prayer program helped them to develop gratitude.
- 65.38% of the student teachers strongly agree that prayer program helped them to develop decisiveness.
- 62.82% of the student teachers strongly agree that prayer program helped them to develop the quality of an adaptive attitude.
- 50.00% of the student teachers strongly agree that prayer program helped them to develop the character of inspiration and enthusiasm.
- 55.13% of the student teachers strongly agree that prayer program helped them to develop humility.
- 53.85% of the student teachers strongly agree that prayer program helped them to develop the strategic thinking.

Implications of the study:

Leadership qualities are crucial for a teacher as they directly influence the learning environment, student development, and the overall effectiveness of the educational process. These are reasons for leadership is important for a teacher:

1. Creating a Positive Learning Environment
2. Inspiring and Motivating Students
3. Effective Communication
4. Decision-Making Skills
5. Encouraging Collaboration
6. Adaptability and Vision
7. Conflict Resolution
8. Role Modeling
9. Fostering Student Leadership
10. Building a Supportive Community

The prayer talk programme fulfils these to develop for student teachers in a programme. Bacause of that each and every student in the school need to follow the prayer talk programme. That brings them to develop leadership quality.

Limitations of the study:

The study is limited to Kumadvathi College of Edcuation, Shikaripura. It may continue to other locality and other levels like School and under graduate college level.

Conclusions:

Teachers play a critical role in shaping the futures of our youth, and it is essential that they possess a strong set of leadership skills to perform their job effectively. Teachers who have strong leadership skills have the ability to create a positive impact on the classroom environment, students,

and other staff members. While leadership skills can play an important role in a teacher's potential, they are not the sole determinant. A teacher's overall potential depends on a combination of factors, including leadership skills, subject matter expertise, and experience. As mentioned in this article prayer talk programme is one of the effective activities to develop leadership character. I recommend this activity can implement in all levels of education system

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A STUDY OF INTEREST IN SCIENCE IN RELATION TO ACADEMIC ACHIEVEMENT OF SECONDARY SCHOOL STUDENTS IN SCIENCE

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Abstract

This study gives information about how Interest in science influence students' academic achievement. Interest in science is a students' driving force motivating towards acquiring knowledge of scientific concepts, facts, to do experiment, verify results and to get good grades in academic achievement of secondary school. Interest are of two types, one situational interest and other individual interest in this article we study both of the types, their examples and way of developing these types of interest to enhance students' academic achievement. Finally we can see conclusion and educational implication of the study.

Keywords: Interest in Science, Academic achievement, Situational interest, Individual interest

Introduction

Science is an outstanding school subject, essential for school students to take. It is, in fact, the most important of all subjects as it allows students to question their environment to discover new things. In science classes students are encouraged to question why things work and how they work, often carrying out experiments to find out first hand results. When students come across new information, they cannot but ask and question how a particular thing works. Carefully doing experiments and observing, students discover for themselves the effects of different scientific ideas. After experimenting students often set up their experiments to discover their "what if's…" putting into action their ideas and questions.

Science, as a cornerstone of modern education, plays a pivotal role in shaping young minds. It is a subject that not only imparts knowledge but also cultivates essential skills such as critical thinking, problem-solving, and inquiry. For secondary school students, science education is particularly crucial as it lays the foundation for future academic and professional pursuits.

Objectives of the Study

1) To study the relationship between Interest in Science on Academic Achievement of secondary school students.
2) To study the relationships between Interest in science on Academic Achievement of boys and girls

Interest in Science

Interest in science is a driving force of a student's towards learning science. Interest in science stimulates student to acquire certain learning experiences, conducting experiments and verifying scientific concepts, develops scientific attitude, also train student to learn or solve the problem in scientific method. Interest in science of a student's develops aptitude and other personality traits.

Science is body of verifiable knowledge. Concepts, principles, facts etc can be verified by observation and experiment. Secondary school level students at their age may come across many natural phenomena's like formation of rainbow, twinkling of stars etc lives many doubts in their mind like why and how did the rainbow will form, and why did stars twinkles and because of these questions in their mind a driving force will be developed and curiosity to know about the phenomena's and get answers and hence to do and verify the concepts of science by experiments and observation.

In general, interest is understood as a relationship between an individual and an object (Krapp, 2002) hence interest in science is a relationship between an individual and science. Interest is multidimensional, having both cognitive and affective dimensions (Krapp, 2002; Hidi & Renninger, 2006) in the sense a student with interest in science is having cognitive dimensions like knowledge of science analyzing power, problem solving. Interest can be understood as individual or situational interests so that individual interest is internal and stable, and it develops gradually, while situational interest is external, appearing as a response to something interesting in a person's environment (Krapp et al., 1992). An individual's interest in science can be limited to a particular school subject for example physics or to particular topics and activities within a subject domain for example acquiring knowledge about the structure of the atom, a discipline for example atomic physics, or a research field for example atomic structure. Interest in science is known to be an important internal factor that influences learning science. Personal interest in science is known to be linked to one's own internal motivations. An internally motivated student likes to put his or her efforts into studying science subject he or she likes. Students also have the patience to study the less interesting topics of a science, for example, revising for exams, if they have the desire to get good grades. Student's motivation to study may be external, linked to rewards or achievement, for example, the motivation to get into higher education or a future career. In many studies, lower secondary school girls are found to be more interested in biology than boys, but boys favor mathematics, physics, and chemistry to biology. Interest in science may be individual interest in science and situational interest in science. Individual interest in science is a relatively stable, enduring personal predisposition to do science tasks, activities, explore science topics or natural phenomena's, conducting experiments, verification of results etc. That is, we mean to say interest in science develops over time as a result of life experiences, innate preferences, or orientations. Situational interest in science get stimulated when student's come across situations like conducting magic by musician and may be science related phenomena. A surprising science laboratory experiment may induce a student's interest in science immediately even though he or she is not normally interested in science that is we can day it is a momentary psychological state of positive emotion and heightened concentration, which may not last for a long time.

Review of Related Literature

Amal Alhadabi (2021). "Science Interest, Utility, Self-Efficacy, Identity and Science Achievement among High School Students: An Application of SEM Tree" in Frontiers in Psychology Volume 12 Article 634120. This study revealed that science interests had stronger associations with science self-efficacy and identity compared with science utility and science self-efficacy had direct positive effects on science identity and science achievement.

Derek Cheung (2017). In his investigation "The key factors affecting students' individual interest in school science lessons" International Journal of Science Education. In this study students are more likely to be interested in studying science at school if they believe themselves to have higher levels of competence to learn science successfully.

Okafor Ogechukwu Scholastica (2020). A study on "Interest as Predictor of Academic Achievement of Secondary School Students in Physics" concludes that about 66% of the physics students had low achievement in their SSII terminal assessment. The proportion of students with moderate and high achievement are about 21% and 14% respectively. This suggests that 66% had poor physics achievement while about 34% had good achievements.

Godpower-Echie Glory Ihenko, Sopuruchi (2017). A study on "Influence of Gender on Interest and Academic Achievement of Students in Integrated Science in Obio Akpor Local Government Area of Rivers State, Nigeria" European Scientific Journal Vol.13, No.10 ISSN: 1857-7881. The result has shown that gender has significant influence on students' interest in integrated science and gender does not have a significant influence on student's achievement in integrated science.

Oludipe, Daniel I (2012). "Gender Difference in Nigerian Junior Secondary Students' Academic Achievement in Basic Science" Journal of Educational and Social Research Vol. 2 (1) ISSN 2240-0524. This study shown that there is no significant gender difference in students' academic achievement and retention in basic science. This implies that there are no longer distinguishing differences in the cognitive, affective and psychomotor skill achievements of students in respect of gender. Female achievement scores in basic science at the pretest, posttest, and delayed-posttest levels were slightly better than those of their male colleagues.

Some of the Examples to have Situational Interest in Science at Secondary School Level

- Engaging students in hands-on experiments, such as chemical reactions, plant growth, or electrical circuits, can spark curiosity and excitement.
- Organizing science fairs or competitions encourages students to explore their interests and showcase their projects.
- Connecting science concepts to real-world problems or phenomena, like climate change, pollution, or technology, can make the subject more relevant and engaging.
- Organizing field trips to scientific institutions or inviting guest speakers from various scientific fields can expose students to real-world applications of science.
- Incorporating technology through simulations and virtual labs can make complex concepts easier to understand and visually appealing.
- Utilizing educational apps and games can transform learning into a fun and interactive experience.
- Encouraging students to work together on science projects can foster teamwork, communication, and problem-solving skills.
- Allowing students to explore their own scientific questions can promote creativity and critical thinking.
- Sharing stories of successful scientists can inspire students to pursue careers in science.

- Connecting students with scientists or professionals in STEM fields can provide guidance and support.
- Fostering a classroom culture that encourages questions and curiosity can stimulate interest in science.
- Recognizing and rewarding student success in science can boost confidence and motivation.

Some of Examples to have Individual Interest in Science at Secondary School Level

- A child fascinated by space, spending hours watching documentaries and building models.
- A teenager interested in physics, joining a science club and conducting experiments.
- An adult passionate about climate change, following scientific research and advocating for environmental policies.

Interest in Science and Academic Achievement

Academic achievement describes academic outcomes that indicate the extent to which a student has achieved their learning goals.   Academic achievement is the extent to which a student or institution has achieved either short or long term educational goals. Achievement may be measured through students' grade point average, whereas for institutions, achievement may be measured through graduation rates.

Academic Achievement is the progress made towards the goal of acquiring educational skills, materials, and knowledge, usually spanning a variety of disciplines. It refers to achievement in academic settings rather than general acquisition of knowledge in non-academic settings.

Unlike typical forms of achievement, academic achievement is usually viewed without a definitive endpoint. Rather, the concept is understood as a spectrum along which one can "achieve" certain skills and knowledge, always with the possibility of further developing those skills and increasing the depth, breadth, and specificity of knowledge.

Academic achievement revolves around the central goal of improving the educational knowledge of the students. Because of this goal, the measurement of achievement is often criticized for maintaining a focus on content knowledge rather than problem-solving or product-fashioning skills across.

These might include Grade Point Average, sporting achievements, and years leading a club or committee, places in competitions, academic awards, and honors. As you begin to add academic accomplishments to your resume, you want to give as much context as you can. The best way to do this is to quantify your achievements wherever possible.

Interest in science is a powerful catalyst for academic success. It's the driving force that propels students to explore, learn, and excel in the subject. Students who are genuinely interested in science are more likely to be internally motivated to learn. This intrinsic drive leads to sustained effort and perseverance. Interest fosters a deeper connection to the subject matter, making learning more enjoyable and engaging. Students who are engaged in their studies are more likely to pay attention, participate actively, and retain information. Interest sparks curiosity, leading students to ask questions, seek answers, and delve deeper into scientific concepts. This active exploration enhances understanding and retention. Science often involves solving complex problems. Students with a genuine interest are more likely to approach challenges with enthusiasm and creativity, leading to better problem-solving abilities.

Studies consistently show a positive correlation between interest in science and academic achievement. Students who are passionate about the subject tend to earn higher grades. Interest in science can inspire students to pursue STEM-related careers, leading to higher educational aspirations and achievements. A strong interest in science cultivates a lifelong love of learning. This mindset is essential for continued growth and adaptation in a rapidly changing world. Scientific literacy is crucial for making informed decisions as citizens. Interest in science fosters the ability to critically evaluate information and engage in constructive discussions about scientific issues.

Impact of Interest in Science on Academic Achievement

- Students passionate about science are more intrinsically motivated to learn. This intrinsic drive leads to sustained effort and perseverance.
- Interest fosters a deeper connection to the subject, making learning more enjoyable and engaging. Students who are engaged are more likely to pay attention, participate actively, and retain information.
- Interest sparks curiosity, leading students to ask questions, seek answers, and delve deeper into scientific concepts. This active exploration enhances understanding and retention.
- Science often involves solving complex problems. Interested students are more likely to approach challenges with enthusiasm and creativity, leading to better problem-solving abilities.
- Studies consistently show a positive correlation between interest in science and academic achievement. Students passionate about the subject tend to earn higher grades.
- Interest in science can inspire students to pursue STEM-related careers, leading to higher educational aspirations and achievements.
- A strong interest in science cultivates a lifelong love of learning. This mindset is essential for continued growth and adaptation in a rapidly changing world.
- Scientific literacy is crucial for making informed decisions as citizens. Interest in science fosters the ability to critically evaluate information and engage in constructive discussions about scientific issues.

A Gender Perspective of Interest in Science in Relation to Academic Achievement

The relationship between interest in science and academic achievement has been a subject of extensive research, particularly when examined through the lens of gender. This study explores the existing literature on the correlation between science interest and academic performance among secondary school boys and girls.

Traditionally, there has been a perceived notion that boys exhibit a greater interest in science compared to girls. However, recent studies have challenged this stereotype, suggesting a more complex picture. While some studies continue to report higher science interest among boys, others find no significant gender differences or even a slight inclination towards science among girls. However in the context of gender research consistently demonstrates a positive correlation between interest in science and academic achievement for both boys and girls. So we can conclude that students who express a genuine interest in science tend to perform better in science subjects and hence in academic achievement.

Keep in view of gender perspective some of the factors that influence interest in science are like socio-cultural, classroom environment, curriculum and pedagogy and personal factors. Socio-cultural factors such as stereotypes, parental expectations, and societal norms can influence individual's perception of science as a male-dominated field. Classroom environmental factors such as teachers' attitudes, teaching methodologies, and classroom climate can significantly impact students' interest in science. Curriculum and pedagogy factors such as engaging and relevant science curricula can foster interest, while traditional teaching methods may alienate students. Personal factors such as individual interests, learning styles, and self-efficacy also play a role in shaping science interest.

Conclusion

Interest in science is a pivotal factor in determining academic achievement among secondary school students. It serves as a powerful catalyst, igniting motivation, engagement, and a deeper understanding of scientific concepts. It creates a positive learning environment where students are more likely to excel and develop a strong foundation for future endeavors.

Students who are passionate about science either boys or girls are more likely to excel academically, pursue STEM-related careers, and develop a lifelong love of learning. Therefore, fostering and nurturing interest in science should be a primary goal in education. By creating stimulating and engaging learning environments, teachers can empower students to reach their full potential in science and beyond.

Educational Implications

- Science curriculum should be made more appealing to secondary students, more consistent with calls for scientific literacy that is curriculum that enable future citizens to critically process scientific information in contexts of personal relevance that provide an insight to the nature and development of scientific knowledge, and more culturally and socially relevant.

- Science education should aims at fostering an appreciation and understanding of science, by taking into account those aspects that are valued by students in their everyday lives, and in a variety of contexts, such as health, or environmental issues.

- Developing diversifying science literacy according to the interests and cultures of all students and merging science practices with culturally relevant everyday knowledge and discourse.

- Teachers with an abundance of resources at their disposal are better equipped to cater to a variety of learning styles and levels offering better support to their students.

- Students with access to laboratory equipment, computers, well-stocked libraries, and sports equipment are more highly engaged and tend to perform better.

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SKILL DEVELOPMENT AMONG SOCIOLOGY STUDENTS: EVOLVING PERSPECTIVES IN CONTEMPORARY TIMES

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Abstract

This research article examines the evolving perspectives on skill development among sociology students in response to contemporary challenges and demands. With the rapid changes in technology, globalization, and inter disciplinary approaches, there is a growing need for sociology students to develop practical skills along with their theoretical knowledge. A descriptive survey method was employed, using simple random sampling, and data were collected through a self-prepared tool. This study analyzes data collected from 100 sociology students in Shivamogga, focusing on their perceptions of the importance of various skills, their current skill levels, and the gaps in skill development. The findings highlight critical areas for educational improvement. and the key challenges they face in adapting to current academic and professional environments. To provide recommendations for enhancing skill training within sociology programs.

Introduction

In today's rapidly evolving global landscape, sociology students are increasingly required to possess not only theoretical knowledge but also a wide array of practical skills that prepare them for both academic and professional challenges. Traditionally, sociology has emphasized critical thinking, social theory, and research methodologies. However, with the rise of digital technologies, globalization, and interdisciplinary collaboration, the demand for practical skills such as data analysis, communication, and digital literacy has increased. This study explores the evolving perspectives on skill development among sociology students and identifies key gaps in their current education. It also proposes strategies to enhance these skill sets in sociology curricula to align students' abilities with modern-day professional requirements.

Objectives

The key objectives of this study are:

- To identify the essential skills required for sociology students in the contemporary job market.
- To assess the current proficiency levels of sociology students in these critical skills.
- To highlight the gap between the importance of these skills and students' self-assessed proficiency.
- To provide suggestions for enhancing skill development in sociology curricula.

3. Methodology

- **Sample Size**: The study surveyed 100 B.A sociology students, in shivamogga.
- **Data Collection**: Data was collected using a structured questionnaire consisting of Likert scale items (1-5) that assessed:
  - Perceived importance of various skills.
  - Current proficiency levels in these skills.
  - Perceptions of skill gaps and areas for improvement.

- **Data Analysis**: The responses were analyzed using statistical software to calculate average scores and percentage distributions.

Review of related literature

Yorke, M., & Knight, P. (2006). "Embedding employability into the curriculum." Learning and Employability Series.

Review: This literature emphasizes the integration of soft skills like critical thinking, communication, teamwork, and problem-solving into higher education curriculums, which are essential for employability. The review discusses how traditional sociology education, though focused on theoretical aspects, must evolve to include these transferable skills, especially in contemporary job markets. Sociology students benefit from developing soft skills to apply sociological theories in practical, real-world scenarios, enhancing their readiness for diverse roles beyond academia.

Holmes, L. (2013). "Competing perspectives on graduate employability: possession, position or process?" Studies in Higher Education.

Review: This study discusses the growing gap between the skills sociology students acquire during their education and the expectations of employers. Sociology programs often emphasize critical thinking, research methodologies, and sociological theory, but less focus has been placed on practical applications, technological proficiency, and adaptability. Holmes argues for a revision in the curriculum, proposing more emphasis on practical skill development, internships, and applied sociology to prepare students for contemporary roles in public policy, community work, and data analysis.

Davies, P., & Dunne, M. (2016). "Developing Digital Literacy and Quantitative Skills in Sociology." *Journal of Applied Sociology*.

Review: This literature explores how the rise of digital technologies and big data analytics has created a demand for sociology students to develop strong quantitative and digital literacy skills. The study highlights that while sociology traditionally relies on qualitative research, there is a growing need for proficiency in data analysis tools like SPSS, R, and Python, alongside an understanding of digital media's role in shaping society. The authors advocate for sociology curriculums to incorporate more quantitative and data-driven courses to meet the evolving skill demands of the digital age.

Data Analysis

1.Importance of Skills

Students were asked to rate the importance of specific skills on a scale of 1 to 5, where 5 represents "very important."

Skill	Importance Rating (%)
Critical Thinking	95%
Data Analysis	90%
Communication Skills	92%
Digital Literacy	85%
Cultural Competency	88%

- **Analysis**: The majority of students rated critical thinking (95%) and communication skills (92%) as extremely important. Data analysis (90%) and cultural competency (88%) followed closely, while digital literacy was still considered essential by 85% of respondents.

2. Current Proficiency Levels

Skill	Current Skill Rating (%)
Critical Thinking	75%
Data Analysis	60%
Communication Skills	70%
Digital Literacy	55%
Cultural Competency	65%

- **Analysis**: While students believed they were fairly proficient in critical thinking (75%), there was a noticeable drop in self-reported proficiency in data analysis (60%) and digital literacy (55%). Communication skills (70%) and cultural competency (65%) also showed room for improvement.

3. Gap in Skill Development

Skill	Importance Rating (%)	Current Skill Rating (%)	Gap (%)
Critical Thinking	95%	75%	20%
Data Analysis	90%	60%	30%
Communication Skills	92%	70%	22%
Digital Literacy	85%	55%	30%
Cultural Competency	88%	65%	23%

- **Analysis**: The biggest skill gaps are observed in data analysis (30%) and digital literacy (30%), indicating that students recognize the importance of these skills but feel inadequately prepared. The gaps in communication skills (22%) and cultural competency (23%) are also significant, underscoring the need for focused skill development.

Findings

The findings of this research show a clear disparity between the skills sociology students deem important and their self-reported proficiency levels:

- **High Importance, Low Proficiency**: Skills like data analysis and digital literacy, which are vital in today's data-driven world, show the largest gaps between importance and proficiency. This highlights the urgent need to focus on these areas in educational programs.
- **Moderate Gaps in Communication and Cultural Competency**: While these skills are considered important, students feel somewhat more confident in these areas, though there remains a substantial gap.
- **Critical Thinking**: Students reported a relatively high proficiency in critical thinking, though there is still a 20% gap, suggesting room for improvement, particularly in applying this skill in complex, real-world scenarios.

Suggestions

Based on the findings, the following suggestions are proposed to improve skill development among sociology students:

1. **Curriculum Reform**: Sociology programs should integrate practical skill-building into the curriculum. This includes mandatory courses in data analysis, digital tools, and communication.
2. **Hands-on Learning**: More hands-on workshops and lab-based learning opportunities should be provided to enhance digital literacy and data analysis skills. This will allow students to practice using digital tools and software that are relevant in the field of sociology.

3. **Internships and Fieldwork**: Offering structured internships and fieldwork opportunities where students can apply theoretical knowledge in real-world situations can help bridge the gap between academic learning and practical skills.

4. **Interdisciplinary Collaboration**: Sociology departments should collaborate with computer science, statistics, and communication studies to offer interdisciplinary courses that combine theory with practical applications, especially in the context of big data and digital analysis.

5. **Skill-Based Workshops**: Conducting regular skill-based workshops focused on communication, cultural competency, and digital tools will give students the chance to develop their practical skills outside the classroom.

6. **Mentorship and Career Guidance**: Providing mentorship programs and career counseling services can help students better understand the importance of specific skills in various career paths and prepare them accordingly.

Conclusion

The study demonstrates a clear need for enhancing skill development among sociology students, particularly in the areas of data analysis, digital literacy, and communication. While critical thinking remains a strong area, there is a growing recognition that sociology graduates need to be well-rounded, with the ability to apply their knowledge in real-world contexts. By addressing the gaps identified in this research and implementing the proposed strategies, sociology programs can better prepare students for the complexities of the modern workforce, ensuring they are equipped with the skills needed to succeed in diverse professional environments.

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COMPETENCY-BASED EDUCATION: WHY TEACHER'S PROFESSIONAL DEVELOPMENT MATTERS

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Abstract

The National Education Policy (NEP) 2020 introduced competency-based education (CBE) as a student-centric approach to teaching and learning in India. Competency-based education (CBE) is an approach to curriculum design, teaching – learning and evaluation that emphasizes on attainment of learning outcomes, in particular competencies in each subject. CBE methodology works to empower students and provide them with a meaningful and positive learning experience. It is a student-centered approach and actively engages them in the learning process. It emphasizes real-world applications of knowledge and skills and competencies. It is beyond the traditional method of simply relaying the teaching content, completing the syllabus, or conducting tests. In fact, it focuses on measuring the skills, knowledge, attitude, and competencies that the students attain at the end of schooling. Teachers and students who have been accustomed to conventional or traditional methods of teaching and learning may face issues. They might find the OBE model a little too modern, making them resist adopting it. This paper studied the challenges faced by the school science teachers in implementing the CBE based teaching practices in secondary schools. It also emphasizes the need of continuous professional development of teachers for the implementation of CBE at grass root levels.

Keywords: Competency Based Education, Teacher training, Professional development

Introduction:

Competency-based education (CBE) is a pedagogical approach that shifts the focus from time spent in school to mastery of specific skills and knowledge. Teachers play a pivotal role in implementing CBE, and their professional development is essential to ensure its success. This study will explore the interconnectedness of CBE and teacher professional development, highlighting the importance of equipping educators with the necessary skills and knowledge to effectively facilitate student learning in this innovative framework.

By aligning with CBE, teachers can foster a more personalized and student-centered learning environment. This approach allows students to progress at their own pace, ensuring that they have a solid foundation in essential skills before moving on to more complex concepts. Moreover, CBE can promote deeper learning and critical thinking by emphasizing the application of knowledge and skills to real-world problems. However, the successful implementation of CBE requires teachers to possess a wide range of competencies, including effective instructional strategies, assessment techniques, and the ability to provide personalized support to students.

Key Alignments between NEP 2020 and CBE

1. **Focus on Holistic Development:** Both NEP 2020 and CBE emphasize the development of the whole child, encompassing cognitive, social, emotional, and ethical aspects. This approach aims to create well-rounded individuals who can contribute meaningfully to society.

2. **Learner-Centered Approach:** Both frameworks prioritize the learner as the center of the educational process. NEP 2020 advocates for a flexible and personalized curriculum, while CBE focuses on individual learning pathways and mastery of specific competencies.

3. **Experiential Learning:** NEP 2020 encourages experiential learning, which is a core principle of CBE. By engaging students in real-world activities and problem-solving, both approaches promote deeper understanding and application of knowledge.

4. **Assessment for Learning:** Both NEP 2020 and CBE advocate for a shift from summative assessment to formative assessment. This means that assessments are used as tools for learning and improvement, rather than solely for grading purposes.

5. **Skill Development:** NEP 2020 places a strong emphasis on skill development, which is a key component of CBE. By focusing on practical skills and competencies, both frameworks aim to equip students with the knowledge and abilities needed for the 21st century.

Importance of the CBE Project:

The project aligns India's education system with international standards, making it easier for Indian students to compete in a globalized world. CBE emphasizes the development of critical thinking, problem-solving, and creativity, which are essential skills for the 21st century. CBE goes beyond traditional exams to assess students' understanding through projects, presentations, and practical demonstrations. This provides a more holistic view of students' abilities. CBA prepares students for the challenges of the future by equipping them with the skills needed to succeed in a rapidly changing world. The project also involves training teachers to implement CBA effectively, ensuring that they have the necessary skills and knowledge to support students' learning.

Benefits for Students:

CBA allows students to learn at their own pace and develop their skills in areas of interest. By focusing on practical skills, CBA can boost students' confidence and self-esteem. Students who have developed higher-order thinking skills and practical abilities are more likely to succeed in their careers.

Benefits for Schools:

CBE can enhance the quality of education by promoting a more student-centered and inquiry-based approach to learning. Schools that implement CBE can improve their reputation and attract more students. The Competency-Based Assessment project between the CBSE and British Council is a valuable initiative that has the potential to revolutionize education in India. By focusing on assessment that caters to teaching and evaluation of higher-order thinking skills, practical application of knowledge, and holistic assessment, the project can equip students with the skills they need to succeed in the 21st century and beyond.

Establish a CBE ecosystem

Providing training are essential requirements to a successful transition to CBE. Having everyone committed to equity is the foundation of CBE implementation. This commitment must be established at different levels, including school systems (e.g., local education authorities), school leadership, and teachers. It is not possible to successfully implement CBE without a firm commitment from these key players. While equality is to give the same thing to everyone, equity is to provide personalized learning opportunities that enable every single student to reach the same end goals. As a

result, CBE requires every education system and school leadership to identify, understand, and remove all kinds of bias from the learning environment. To give every student the same chance for success, schools must identify each student's weaknesses and customize learning experiences that help address these specific weaknesses. "Thus, the predictability of achievement based on culture, social class, household income, or language is completely removed". Moreover, equity requires an inclusive context where all students from different backgrounds feel safe and respected (Juraschka, 2021).

The key steps of implementing of CBE are redefining learning objectives, building an integrated curriculum design, developing active and experiential learning, and developing evaluation methods for the assessment of competencies.

Redefining Learning Objectives:

The first step in this transformation is to redefine learning objectives. Instead of solely focusing on content mastery, educators should prioritize the acquisition of core competencies such as critical thinking, problem-solving, creativity, collaboration, communication, and digital literacy. These competencies will enable students to navigate a rapidly changing world effectively.

Integrated Curriculum Design:

Moving away from a subject-based approach, the curriculum should be designed to foster interdisciplinary learning. Integrating different subjects allows students to see the connections between them and apply their knowledge and skills in real-world contexts. This approach encourages holistic development and helps students understand the practical implications of their learning.

Active and Experiential Learning:

Active and experiential learning methodologies engage students in hands-on activities, group projects, experiments, and real-world problem-solving. This approach promotes deeper understanding, encourages curiosity, and enhances critical thinking skills. It also cultivates a love for learning and encourages students to take ownership of their education.

Assessment of Competencies:

Assessment practices need to align with the shift toward competency-based education. Traditional examinations that focus on memorization should be supplemented with performance-based assessments that evaluate students' ability to apply knowledge and skills in practical situations. Portfolios, projects, presentations, and simulations can provide a more comprehensive picture of a student's abilities.

Teacher Training and Professional Development:

For successful implementation, teachers need to be equipped with the necessary knowledge and skills to facilitate competency-based learning. Training programs should focus on pedagogical techniques that encourage active learning, effective assessment strategies, and integration of technology in the classroom. Ongoing professional development opportunities can support teachers in adapting to the evolving educational landscape.

Technology Integration:

Technology can play a pivotal role in transforming education. It provides access to vast resources, facilitates personalized learning, and fosters collaboration beyond the physical classroom.

Integrating technology tools and <u>digital resources can enhance engagement</u>, provide interactive learning experiences, and support the development of 21st-century skills.

Collaboration with Industry and Community:

To bridge the gap between education and the real world, collaborations with industries and community organizations are essential. <u>Partnerships can facilitate internships</u>, apprenticeships, mentorship programs, and projects that expose students to practical challenges and provide opportunities for skill development.

Conclusion:

The implementation of Competency-Based Education (CBE) in India presents a significant opportunity to transform the educational landscape. However, successful implementation hinges on the professional development of teachers. Teachers must be equipped with the necessary skills, knowledge, and attitudes to effectively support students' learning in a CBE environment. This involves providing them with training on curriculum development, assessment strategies, and instructional techniques that align with CBE principles. Moreover, ongoing professional development is crucial to ensure that teachers stay updated with the latest pedagogical approaches and best practices. By investing in teacher professional development, India can maximize the potential of CBE and create a more equitable and effective education system for all.

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LIFELONG LEARNING

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Abstract

Lifelong learning is an ongoing process of acquiring knowledge, skills, and competencies throughout one's life. In today's fast-changing world, it is crucial for individuals to continuously learn and adapt to remain relevant in both personal and professional spheres. Lifelong learning encompasses formal, non-formal, and informal education, empowering people to keep pace with advancements in technology and shifts in the job market. It enhances personal growth by fostering creativity, curiosity, and cognitive health, while professionally, it equips individuals with the skills necessary to thrive in dynamic industries.

This continuous learning process also contributes to societal development by cultivating informed, engaged citizens capable of addressing complex global challenges such as climate change and inequality. However, barriers such as the digital divide, financial constraints, and time limitations hinder access to lifelong learning for many.

To promote inclusive learning, collaborative efforts among governments, educational institutions, and the private sector are essential. In Karnataka, initiatives like Kaushalya Karnataka and Sakshara Bharat Mission provide vocational training and literacy programs to support lifelong learning for all, particularly marginalized communities. These programs emphasize skill development, accessibility, and social equity, creating opportunities for individuals to enhance their employability and quality of life.

Ultimately, lifelong learning is key to personal fulfillment, professional success, and societal progress. By embracing continuous education, individuals and societies can foster adaptability, resilience, and a commitment to ongoing growth in an ever-evolving world.

Introduction

Lifelong learning is a dynamic and evolving process that emphasizes the continuous acquisition of knowledge, skills, and competencies throughout one's life. In today's fast-paced world, where technology is rapidly advancing and societal needs are constantly shifting, the ability to continuously learn and adapt has become a critical necessity. Lifelong learning goes beyond formal education, as it encompasses all forms of learning—formal, non-formal, and informal—allowing individuals to acquire new knowledge and skills at any stage of life. This ongoing learning process empowers people to stay relevant in the workforce, adapt to changes in various industries, and meet personal development goals. As technological advancements such as artificial intelligence, automation, and digitalization reshape industries, the traditional model of completing education in one's youth and applying it throughout an entire career has become outdated. Today's workforce must be agile, constantly updating their skills to stay competitive. Lifelong learning equips individuals to navigate these changes by fostering critical thinking, problem-solving, and technical proficiency, enabling them to keep pace with the rapid evolution of their respective fields.

Beyond professional growth, lifelong learning also plays a vital role in promoting personal development. It helps individuals explore new interests, improve self-awareness, and maintain cognitive health as they age. The process of learning fosters curiosity, creativity, and adaptability, enriching lives

both personally and socially. Through continuous learning, individuals remain engaged, mentally active, and open to new perspectives.

Moreover, lifelong learning contributes to the development of active citizenship and social inclusion. By engaging in continuous education, individuals gain the tools needed to participate effectively in their communities, understand global issues, and make informed decisions that impact society. In this sense, lifelong learning helps build more knowledgeable, responsible, and engaged citizens, capable of addressing challenges at both local and global levels.

The Karnataka Government has recognized the importance of lifelong learning and has implemented various schemes to support its citizens in this endeavor. These programs focus on skill development, adult education, and literacy, ensuring that people from all walks of life have access to education and training opportunities that can improve their employability and quality of life. Programs such as **Kaushalya Karnataka** and **Sakshara Bharat Mission** emphasize vocational training, literacy, and adult education, aiming to create a skilled workforce while also improving social equity and inclusion. This paper delves into the significance of lifelong learning in today's world, examining how it shapes personal and professional development. It also highlights key components that make up lifelong learning, such as formal education, non-formal learning programs, digital literacy, and adult education. The opportunities presented by technological advancements, such as online learning platforms and workplace training, offer new avenues for people to continue their education at any age. However, challenges such as the digital divide, financial barriers, and time constraints persist, making it essential to create accessible and inclusive learning opportunities for all.

Practical implementation of lifelong learning can be observed across different spheres of life, including workplaces, community programs, and government initiatives. As lifelong learning becomes more integrated into educational and professional systems, individuals will be better equipped to meet the demands of an ever-changing world, fostering not only personal growth but also societal advancement. Through a detailed exploration of these aspects, this paper underscores the vital role of lifelong learning in shaping a resilient and adaptable society.

Keywords
- Lifelong Learning
- Continuous Education
- Karnataka Government Schemes
- Learning Opportunities
- Skill Development
- Challenges of Lifelong Learning

Meaning of Lifelong Learning

Lifelong learning refers to the continuous, voluntary, and self-motivated pursuit of knowledge, skills, and competencies. It encompasses all forms of learning, including formal education (schools and universities), non-formal education (workshops and training programs), and informal education (learning through experiences, self-study, and life events). Lifelong learning is essential for personal growth, maintaining professional relevance, and contributing to societal advancement. It enables individuals to adapt to rapid changes in technology, the labor market, and society.

Key Quotes on Lifelong Learning

1. "Education is not the learning of facts, but the training of the mind to think." – **Albert Einstein**
2. "Live as if you were to die tomorrow. Learn as if you were to live forever." – **Mahatma Gandhi**
3. "The beautiful thing about learning is that no one can take it away from you." – **B.B. King**

Karnataka Government Schemes for Lifelong Learning

Karnataka has taken significant steps to promote lifelong learning and skill development through various government initiatives aimed at enhancing employability and personal growth. Some of these schemes include:

1. **Kaushalya Karnataka**: A flagship program that focuses on skill development and vocational training for youth to enhance their employability in various industries.
2. **Jnanajyothi**: Aimed at adult education, this program focuses on improving literacy rates and providing access to basic education for all age groups, including the elderly.
3. **National Institute of Open Schooling (NIOS)**: The Karnataka government promotes NIOS, which offers flexible learning opportunities for students and adults seeking secondary and senior secondary education.
4. **Karnataka State Skill Development Corporation (KSDC)**: This corporation works on providing skill enhancement programs in diverse fields, helping citizens learn new trades and improve existing skills to align with industry demands.
5. **Sakshara Bharat Mission**: In alignment with the National Literacy Mission, this scheme focuses on increasing literacy rates among the rural population, especially women.

These initiatives underscore the government's commitment to fostering a culture of continuous learning and skill enhancement for all sections of society.

Components of Lifelong Learning

1. **Formal Learning**: Structured educational programs provided by schools, colleges, and universities, leading to recognized qualifications.
2. **Non-Formal Learning**: Educational activities that are not part of the formal education system, such as community-based learning programs, workshops, and online courses.
3. **Informal Learning**: Knowledge and skills gained through everyday experiences, including interactions, observations, and personal interests.
4. **Digital Literacy**: The ability to use technology effectively for learning purposes, such as online learning platforms, digital tools, and e-resources.
5. **Adult Education**: Specialized programs designed for adults who wish to continue their education or gain new skills to improve their career prospects or personal development.

Opportunities for Lifelong Learning

1. **Skill Development and Vocational Training**: Lifelong learning provides individuals with the chance to acquire new skills and enhance existing ones to meet the demands of a dynamic labor market.
2. **Online Learning Platforms**: With advancements in technology, platforms like Coursera, edX, and Khan Academy have made education more accessible to people of all ages, allowing for self-paced and flexible learning.

3. **Workplace Learning**: Many employers provide training programs, workshops, and professional development opportunities to help employees improve their skills and grow in their careers.
4. **Community Programs**: Local government and non-governmental organizations (NGOs) often offer free or low-cost educational programs for adults in literacy, numeracy, and life skills.

Challenges of Lifelong Learning

1. **Digital Divide**: Not everyone has equal access to digital devices and the internet, which hinders participation in online learning, especially in rural and underprivileged areas.
2. **Time Constraints**: Adults often struggle to balance learning with work, family, and other responsibilities, limiting the time they can dedicate to self-improvement.
3. **Financial Barriers**: While some educational resources are free, many advanced learning opportunities, especially in formal education and skill training, may be costly and inaccessible to low-income individuals.
4. **Motivation and Mindset**: Some adults may lack the motivation or confidence to pursue education later in life due to previous negative experiences or perceived challenges.

Conclusion

Lifelong learning is a crucial element of personal, professional, and societal growth, transcending traditional education. In a rapidly evolving world marked by technological advances and shifting global dynamics, continuous learning equips individuals with the skills needed to adapt and thrive. On a personal level, lifelong learning enhances intellectual curiosity, problem-solving abilities, and cognitive health, fostering a sense of purpose and achievement. Professionally, it enables individuals to stay competitive in the job market by acquiring new skills in areas like digital literacy and innovation, which are essential in today's fast-changing industries.

Societally, lifelong learning cultivates informed and engaged citizens capable of addressing challenges such as climate change and inequality. It fosters critical thinking, open-mindedness, and active participation in civic life, promoting inclusivity and community cohesion. However, barriers such as the digital divide, financial constraints, and time limitations can hinder access to continuous education. Addressing these challenges requires collaboration between governments, educational institutions, and private organizations. Initiatives such as Karnataka's Kaushalya Karnataka and Sakshara Bharat Mission provide vocational training and literacy programs, emphasizing skill development and accessibility for marginalized groups. These efforts highlight the importance of creating flexible and affordable learning opportunities for all.

Ultimately, lifelong learning is key to personal fulfillment, career success, and societal advancement. By promoting a culture of continuous learning, we can ensure individuals remain adaptable and capable of contributing meaningfully to both their communities and the broader global society.

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CLASSROOM ENVIRONMENT AND TEACHER EDUCATION IN THE 21ST CENTURY
(Category-Theme Based Article)

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Abstract

The education of 'Z' generation demands a balance of updated knowledge and 21st -century skills. The demographic specialty of India is that it is developing as a country with a large number of people in the working age group. Highly talented and dedicated human resource is needed to lead India from a developing to a developed global power. For this, advanced teaching methodologies, enjoyable learning, and innovative evaluation strategies are needed. In this context, the environment of the classroom that supports teaching, learning and evaluation is very crucial. The concept of a classroom environment has already undergone significant transformations in the past decade in schools and colleges.
This article identifies the various issues of teaching, learning and evaluation related to classroom situations in the higher educational sector, especially in teacher educational institutions, where the classrooms must be much more than merely functional. This article makes an in-depth analysis of various strategies to improve the present classroom environment in the context of NEP 2020. Critical pedagogy and novel developments such as flipped classrooms are focused and discussed.
***Key words:** 21st Century Skills, Class room environment, Critical Pedagogy, Flipped Classroom.*

Introduction

The 21st century is experiencing new trends that revolutionize the Indian educational system. The Indian education system has evolved remarkably, especially in the last decade, with a focus on digitalization, outcome and skill-based education, vocational training and inclusivity. "The rapid advancement of technology, social change, and unprecedented access to information highway has created a 'Z' Generation (Dingari,2024) who possess technological proficiency, multitasking abilities, diverse content interests, and a preference for interactive learning.

The Indian education system made a significant transformation after the COVID-19 pandemic. This period witnessed the digitalization of education and the launching of the National Education Policy 2020 (NEP 2020) . The launching of National Education Policy intends to create outcome-based education with a balance in knowledge and skill. Students experience great accessibility, affordability, and flexibility with the help of this policy change synergistically with adequate digitalization.

 The National Education Policy 2020 envisaged that education "is developing an equitable and vibrant knowledge society". It recommends that "it is becoming increasingly critical that children not only learn but more importantly learn how to learn. Education must move more towards learning about how to think critically and solve problems, how to be creative and multidisciplinary, and how to innovate, adapt, and absorb new material in novel and changing fields. Pedagogy must evolve to make education more experiential, holistic, integrated, inquiry-driven, discovery-oriented, learner-centered, discussion-based, flexible, and, of course, enjoyable." (NEP,2020) Hence a balance of updated knowledge and 21st-century skills are the need of the hour.

From a demographic perspective, India is developing as a country with a large number of people in the young working age group. Highly talented and dedicated human resources are needed to lead our nation from a developing to a developed global power. It is an accepted fact that the new generation will be engaged in jobs which are unheard now. In order to make them knowledgeable, skillful, and employable, the educational sector must be empowered and upgraded with the right knowledge, attitude, skills, and competencies continuously. The young generation should be capable, motivated, creative, determined, and energized in performing their educational task (Bharadwaj,2024). In the context of teacher education, the teachers of future teachers must be equipped with digital to ensure the confident, creative, and critical use of technologies in their teaching-learning process.

However, achieving quality in teacher education faces several challenges. These include the need for a relevant curriculum, empowered teacher educators, well-equipped institutions, integration of technology, and support from other institutions in the educational system besides a pleasant environment (Kaza and Ramesh, February 2024). Unfortunately, the present teacher training colleges face a variety of challenges that hinder the complete and effective deliverance in teaching and achievement of learning. These issues often originate from the physical and psychological environment of the classroom.

VARIOUS CHALLENGES IN THE CLASSROOM ENVIRONMENT
CHALLENGES IN TEACHING:

Traditional pedagogies: Despite widespread recognition of the need for student-centered approaches, many teacher training programs rely blindly on traditional, lecture-based methods. Student teachers thus lack training in new pedagogies, technologies or subject matter and this affects the quality of teaching. Eventually, the method of teaching becomes teacher-centric, which limits student engagement and discourages critical thinking and creativity. Traditional pedagogies mask the ability of both teachers and student teachers to fully realize their potential.

Curriculum Constraints: Rigid curriculum and assessment frameworks limit the creativity of the teacher. The curriculum in many teacher education institutions does not always align with the latest educational scenarios and need of the times. There is often a gap between theoretical knowledge and practical classroom requirements. This in turn leads to inferior classrooms, which results in the gap between theoretical knowledge and practical skills.

Lack of Subject integration: Often, teacher education programs focus on specific subjects without emphasizing the integration of inter disciplinary knowledge which is crucial for holistic education. The hostile boundary between different subjects can be liquified to encourage interdisciplinary learning

Limited Use of Technology: With the growing importance of digital literacy, classrooms in teacher training institutions should become hubs of technological engagement. However, many institutions lack access to modern technological tools and therefore educators may not undergo the necessary training. Student teachers remain hesitant or lack confidence in using technology while teaching. Hence this limits interactive learning experiences.

Limited Focus on 21st Century Skills: The NEP 2020 emphasizes the development of 21st-century skills like **critical thinking, creativity, communication,** and **collaboration** to prepare students for future challenges. To enhance these skills, the NEP suggests several teaching strategies such

Experiential Learning, Art Integrated Learning, Inter-Disciplinary Learning etc. But in many teacher education institutions, proper training is not given to use various teaching strategies to achieve 21ˢᵗ century skills.

Lack of Enough Time: Even if the classroom environment supports in-depth teaching as well as learning, the content delivery may not become effective if there is shortage of time. This may result from the lack of working days and vast syllabus. Teaching methodology will not be fruitful to achieve the set outcome among the learners.

Teacher Educator Quality: The academic quality, level of knowledge, and ability to train student teachers themselves can be a challenge. Many of them may lack recent practical teaching experience or exposure to new teaching methodologies. In the unaided sector, the frequent change of teacher educators especially optional teachers can affect the teacher training programs to a great extent.

CHALLENGES IN LEARNING

Diverse Learning Styles: Student teachers come from diverse backgrounds with different learning styles, aspirations and needs. It is very challenging to cater their academic needs in a standardized curriculum.

Language Barriers of student teachers: Language proficiency also can be an issue, especially when students are expected to master both the content and the pedagogical approaches in languages in which they are less proficient.

Difficulty Linking Theory to Practice: Students often struggle to connect theoretical concepts to real-life applications. Sometimes practical teaching experience or fieldwork is limited, resulting in teacher candidates graduating without sufficient hands-on experience in real classrooms.

Rote Learning: The emphasis on theoretical knowledge often leads to rote learning, with insufficient focus on practical skills, problem-solving, and critical thinking.

CHALLENGES IN EVALUATION

Limited assessment methods: Traditional evaluation methods like written exams often do not assess the full range of a teacher candidate's competencies such as communication, classroom management, soft skills etc. Traditional exams often test students' recall abilities rather than their capacity for problem-solving, innovation, and real-world application

Inconsistent Assessment: Many teacher education institutions rely heavily on summative assessments (end-term examinations) instead of continuous, formative assessments that track students' progress and provide timely feedback.

Bias in Evaluation: Evaluations may sometimes be subjective and influenced by external factors, leading to unfair or inconsistent results. Here deserving candidates may not receive the grades they merit, while others may be unfairly favored, thus affecting the fairness and reliability of the evaluation process.

CHALLENGES FACED IN FACILITIES IN THE CLASSROOM

The layout of the classroom is also a fundamental issue. Many teacher education institutions face challenges related to infrastructure and resources such as inadequate seating and furniture, proper lighting and ventilation, inadequate classrooms, libraries, and laboratories, etc. This can limit the effectiveness of both teaching and learning.

Ill-equipped classrooms: Lack of access to modern teaching tools such as insufficient technological infrastructure such as computers, projectors, smart boards and Wi-Fi can limit effective teaching and learning. Another factor is the essential is the uninterrupted electric supply

Most of the time in aided institutions, governments tend to increase the number of seats to increase the number of beneficiaries. The presence of too many students in a single class for common subjects can lead to discomfort, reduced individual attention, and difficulty in managing the classroom effectively. Besides, noise pollution from ongoing constructions and other distractions limits their concentration in class and reduce their focus of attention. The catalysing effect inadequate ventilation, high temperature inside the classroom also will add to discomforts and distractions in teaching and learning processes.

Lack of Professional Development: There is often a lack of ongoing professional development for teacher educators themselves, leading to stagnation in teaching practices and a lack of innovation and personalized education in the classroom.

Demands of the Modern Classroom: As classrooms become more diverse and inclusive, teachers are expected to manage complex dynamics such as multiculturalism, special needs students, and varying levels of academic readiness, which teacher education programs may not adequately prepare them for.

Lack of Personalized Learning: Classrooms catering to diverse learners often fail to address individual needs, preferences, and learning styles. A one-size-fits-all approach to teaching limits the ability to provide an inclusive and supportive environment for all students and make personalized education only a dream.

TEACHING AND LEARNING STRATEGIES TO IMPROVE THE CLASSROOM ENVIRONMENT

In the context of NEP 2020, it is necessary to adopt modern ways complemented by knowledge-driven technology. Various strategies can be adopted to improve the present classroom environment.

Critical Pedagogy- In teacher education programs, there is a need to foster environments where prospective teachers critically engage with societal issues, including gender, race and environmental sustainability. Dialogical method, connecting learning with real life situations, engaging students with out of book activities, hands-on-study activities, problem-solving strategy are some examples to bring critical pedagogy in the classroom. This approach empowers them to become reflective practitioners who challenge the current situation and contribute to building a just society through education. They should have the exposure to learn the cross-cultural aspects of the society. In teacher education, critical pedagogy helps future educators develop a deeper understanding of social justice, inclusivity, and equity in education. Educators must be trained to facilitate discussions that may be sensitive or contentious. Additionally, institutional support is required to create a culture of openness and critical inquiry.

COLLABORATIVE AND EXPERIENTIAL LEARNING

According to NEP 2020, Learning environments in the teacher training institutions should encourage collaboration and experiential learning. Group activities, peer teaching, and hands-on projects allow students to learn from one another and apply theoretical knowledge to practical situations.

Field Engagement: Teacher education programs should include more field-based experiences, allowing students to engage with diverse communities and apply their learning in real-world contexts. This will prepare future teachers to understand the challenges and nuances of different educational settings and student populations.

Collaborative Learning Spaces: Redesigning classroom spaces to encourage group work, discussion, and movement can break down traditional teacher-student hierarchies and promote a more inclusive and participatory learning environment.

Besides Project based learning, role playing and simulation, engaging in debate, science investigations all these strategies needed to be given training to the student teachers.

TECHNOLOGY INTEGRATED LEARNING

The integration of educational technology allows for personalized learning experiences, differentiated instruction, and the development of digital skills.

Blended Learning-. This type of learning combines traditional face-to-face instruction with online learning. It includes a mix of online and offline activities such as: Online lectures and discussions, In-person labs and group projects, Online quizzes and assignments and In-person tutoring and support (Sarada,2024).

Blended Learning provides professional development for practicing teachers to learn how to use technology, in attending online lectures and doing seminar presentations, evaluate students and to support students in hard-to-reach areas. Student teachers get practice to use blended activities that best suit the subject, the learners' needs, and the curriculum requirements. Proper training for teacher educators, access to high-quality technology, and reliable internet connectivity are essential requirements for successful technology integration. (UGC). Blended learning programs proved to be an effective way to improve student learning outcomes. Students can take more charge of their learning, which can increase their engagement levels. In a blended learning environment, teachers can monitor student progress by analyzing data from online learning platforms and assessment tools. They can use this data to identify areas where students need additional support

Flipped Classroom

The flipped classroom is a suitable learning approach for the 21st-century learners. Students in flipped classes watch a short lecture video online and come into the classroom to complete activities such as group work, projects or other exercises. Here the teacher-centered classroom is flipped over to a student-centered classroom by delivering instructional content, often online, outside the classroom and using classroom time for interactive, hands-on activities such as group discussions or conducting quizzes or a project and so on.

In this Model, the teacher has to plan and prepare the learning content in advance, record videos or create multimedia resources covering the pre-determined topics, and share and encourage the recorded videos to the students in advance. In-class activities have to be designed to include discussions, problem-solving exercises, quizzes or games, experiments or simulations. Prospective teachers should be given proper training in careful planning, integration of technology, implementation of in-class activities, and a readiness in their mindset to use this model during their pre-service training programs.

This model encourages active learning, critical thinking, and application of knowledge as per the directions of NEP 2020. The advantages of the flipped model are that it provides students with the flexibility to learn at their own pace, engage with materials before class, and come prepared for meaningful in-class discussions and problem-solving activities. Teachers must be adept at creating digital content and facilitating in-class activities that reinforce higher-order thinking.

IMMERSIVE LEARNING TECHNOLOGIES

In recent years there has been a growing importance of using immersive learning technology such as virtual reality (VR), augmented reality (AR) and Mixed reality in the educational system. Virtual Reality and Augmented Reality, collectively known as Extended Reality (XR) reinforces the curriculum and student interest. This type of technology creates opportunities for experiential Learning. Schools, universities, and training institutions have increasingly embraced immersive learning to bridge the gap between physical and virtual classrooms, offering learners a dynamic and interactive learning experience.

Virtual reality (VR) is a technology that creates simulated, immersive environments through computer-generated 3D worlds. Virtual Reality has grown in popularity in education during the Covid and Post-Covid period. Virtual Reality training will empower teachers with new digital skills. By putting on a VR headset, the teachers will be transported to a virtual classroom with virtual students. They can then practice their classroom management skills, wherever they might be, and whenever it would be convenient.

In the classrooms of teacher education, student teachers should be given training to master Virtual Reality so that they can incorporate this technology into lesson planning. This technology can help future teachers to teach complex concepts into simpler ones. For example, biology students could experience a virtual journey inside the human body. Mathematics lessons could include 3D models of geometric shapes and aid drawing. This technology allows student teachers to time travel to a past era and virtually visit historical places; understand wars and conflict in a better way and appreciate ancient civilizations. This makes abstract concepts tangible and fostering deeper engagement and understanding (Bardi, 2019; American University, 2019). Social Science teachers can take their students on virtual field trips to historical sites, museums, or ecosystems, providing enriched learning experiences.

Augmented Reality (AR):

Augmented Reality and Virtual reality are both reality technologies, that enhance the real world with a simulated one, but they differ in several ways. Augmented Reality is partly immersive where AR users can perceive both virtual and real-world elements simultaneously whereas Virtual Reality is fully immersive. Here users are completely disconnected from the physical world.AR can be accessed through smartphone tablets or specialized AR glasses, whereas VR are usually assessed through a dedicated VR headset with controllers.

Future educators can use Augmented Reality to simulate classroom environments, experiment with virtual lesson plans, and practice classroom management techniques. It helps visualize complex concepts, making lessons more engaging and accessible. For example, AR apps can project 3D models of anatomy, historical artifacts, or mathematical shapes, helping teacher trainees develop innovative teaching strategies. Additionally, it fosters collaborative learning and critical thinking, preparing future

teachers to integrate this technology effectively in their classrooms for more interactive learning experiences.

Virtual Reality and Augmented Realty are particularly empowering for students diagnosed with learning disabilities. This tech can break down barriers to learning by allowing differently-abled students to learn through experience. It can help students stay focused, persist through challenging tasks, problem-solve, and practice in a low-stress, low-pressure environment

Mixed Reality (MR): In the classroom for teacher education, mixed reality can improve teacher training by combining real world and virtual elements offering immersive hands-on experiences. The implementation of NEP 2020 facilitates the effective use of Virtual Reality Augmented Reality and a synergistic combination of both as Mixed Reality.

INNOVATIVE EVALUATION METHODS

Evaluation should not be limited to summative examinations. A shift toward formative assessments, project-based learning, and continuous feedback is essential for developing 21st-century skills. Peer reviews, portfolio assessments, reflective journals, and open-book assessments can foster a deeper understanding of the material and help students develop critical thinking, creativity, and problem-solving skills. Implementing alternative assessments requires educators to rethink their evaluation strategies, ensuring that they align with learning objectives and are fair, transparent, and supportive of student growth.

DIMENSIONS AND FACILITIES IN THE CLASSROOMS

The classrooms have to be comfortable and functional spaces for effective transaction of curriculum. The dimension of the room, the facilities for seating and storage, the infrastructural facilities and access to such facilities, display facilities, lighting, ventilation, safety and security features, and audio-visual and net connectivity should all be carefully planned and installed. In the classroom, one of the major concerns is the infrastructure. The student should feel comfortable and have the right to have the technological facilities necessary for acquiring knowledge and articulating critical faculties. Stringent benchmarking must ensure that all such facilities are present and available in the classroom. Classrooms should be spacious enough, clean, and well-ventilated with proper lighting to create a conducive learning environment. Small, cramped spaces can negatively affect students' concentration and lead to physical fatigue. Adequate facilities for differentially abled students must be made available within the classroom. Toilet facilities must be provided with easy access. Teaching platforms should be included in general classrooms, allowing all students to see the teacher clearly. Gallery type classrooms are also far more relaxing for the students. A Bulletin board can be used to display recent or everyday developments in the subject or to display creative works of students. Large black/white boards should be installed for better visibility during classes.

A small classroom library encourages reading habits and gives students easy access to learning resources. In teacher educational institutions, theme-based classrooms can be set up based on different optional subjects by integrating different subjects. For example, physical science classroom can set up a theme-based classroom by integrating different subjects like physics and chemistry. Laboratory facilities like charts, models, teaching aids scientific equipment related to physics and chemistry besides reference books can be arranged related to the various themes in these subjects. Social science

classroom can be equipped with charts, maps, models, globe, atlas, specimens of soil, water gauge, magnetic compass etc. along with reference books related to history, economics, political science and geography. This theme-based classroom arrangement will create a conducive environment for focused and inter-connected and learning.

Tablets, e-readers, and mobile-based learning can lighten students' backpacks, reducing back pain. Utilizing club radio is an excellent way to facilitate idea sharing among students. Moreover, fostering an eco-friendly atmosphere enhances the teaching-learning process, creates a positive environment for effective education. Steps should be taken to promote eco-friendly products in the classroom. Availability of chairs, tables, etc. and all other teaching aids such as interactive boards, animations etc. The university should give enough time as per rules for the payment of fees. Management should provide Wi Fi facilities for students besides need based scholarships, drinking water, clean toilets, restrooms etc.

Conclusion

In the context of NEP 2020, the classroom environment in teacher education institutions must evolve to meet the demands of the 'Z' generation and the future of education. By incorporating innovative teaching methods like flipped classrooms, fostering critical pedagogy, integrating technology, encouraging collaborative learning, and developing innovative evaluation strategies, teacher education can become more dynamic, inclusive, and responsive to the needs of society. Better classroom environment will have an impact on personality development, values, self-confidence and safety feeling. The success of these strategies requires concerted efforts from policymakers, educators, and institutions. Investment in infrastructure, professional development, and a shift in educational culture are necessary to create classrooms that function and inspire future educators. Such an approach is essential for producing a highly skilled and adaptable workforce, capable of leading India toward becoming a developed global power.

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FUTURE SKILLS AND COMPETENCIES IN EDUCATION: PREPARING LEARNERS FOR THE NEXT GENERATION

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Abstract

In an era defined by rapid technological advancements, the future of education must pivot toward equipping learners with a new set of skills and competencies. This paper explores the critical future skills that will define successful learning outcomes, including digital literacy, critical thinking, problem-solving, emotional intelligence, creativity, and adaptability. By reviewing recent educational research and trends, this paper seeks to offer insight into how education systems can be redesigned to incorporate these skills into curricula. The discussion is informed by top academic works in the field, including foundational texts on 21st-century skills, cognitive psychology, and emerging pedagogies. The implications for policy, curriculum development, and teacher training are explored, with an emphasis on ensuring inclusivity and equity in future learning environments.

Introduction

The 21st century has seen a profound transformation in the nature of work, society, and technology. These changes have prompted a re-evaluation of the skills and competencies that students need to thrive in the future. Educational institutions are now faced with the challenge of preparing students not just for specific jobs but for an uncertain and rapidly evolving world.

This paper aims to identify key future skills and competencies that will be essential for students to succeed in their professional and personal lives. It also explores how education systems can adapt to equip students with these competencies. Theoretical frameworks from leading experts, including Tony Wagner, Howard Gardner, and Carol Dweck, provide a foundation for understanding these shifts and their implications for education.

1. Purpose and Objectives

1. Identify critical future skills that students will need in the next decades.

2. Examine how educational systems and pedagogies must evolve to foster these skills.

3. Investigate the role of technology and digital literacy in shaping future competencies.

4. Discuss the challenges and opportunities in embedding these skills into educational curricula.

2. The Changing Landscape of Skills and Competencies

2.1 The Fourth Industrial Revolution

The Fourth Industrial Revolution, characterized by the integration of digital, biological, and physical systems, is profoundly reshaping the workforce and society. Klaus Schwab (2016) emphasizes that this transformation requires new skills, particularly those involving complex problem-solving, critical thinking, and creativity. The acceleration of automation, artificial intelligence (AI), and machine

learning are also driving a shift toward skills that cannot easily be replicated by machines, such as emotional intelligence, adaptability, and interpersonal communication.

2.2 The Emergence of Lifelong Learning

In this rapidly evolving landscape, lifelong learning is becoming essential. As Alvin Toffler (1970) suggested, the illiterate of the 21st century will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn. This paradigm shift underscores the importance of fostering Meta cognitive skills, resilience, and adaptability in learners from an early age.

3. Essential Future Skills and Competencies

3.1 Digital Literacy and Technological Fluency

As technology becomes increasingly integrated into daily life, digital literacy is no longer optional. Students must be equipped not only with the ability to use digital tools but also to understand and critically evaluate information in the digital sphere. Technological fluency, which goes beyond basic literacy to include coding, computational thinking, and the ethical implications of technology, will be fundamental for future success.

Howard Rheingold (2012) in Net Smart: How to Thrive Online highlights the importance of these skills, noting that digital citizenship and ethical decision-making will be increasingly vital as digital technologies become more pervasive.

3.2 Critical Thinking and Problem-Solving

Critical thinking remains at the forefront of essential future skills. As AI and automation handle more routine tasks, human workers will be required to engage in higher-order thinking, such as analyzing complex information, identifying problems, and developing innovative solutions. The capacity for critical thought is closely linked to problem-solving skills, which are essential in both personal and professional contexts.

Authors like Tony Wagner (2012) in Creating Innovators stress the need for educators to move away from rote memorization and toward pedagogies that promote inquiry, creativity, and analytical thinking.

3.3 Creativity and Innovation

Creativity is becoming a central competency in many fields. With machines taking over routine tasks, the demand for creative, out-of-the-box thinking is rising. In The Element (2009), Ken Robinson argues that fostering creativity is as important as teaching traditional subjects like mathematics or reading. To prepare students for the future, schools must integrate opportunities for creative expression and innovation across the curriculum.

3.4 Emotional Intelligence and Social Skills

As workplaces become more diverse and collaborative, emotional intelligence (EI) is emerging as a key future skill. Daniel Goleman (1995) defines emotional intelligence as the ability to recognize, understand, and manage one's emotions and the emotions of others. Skills such as empathy, active listening, and effective communication are becoming increasingly important in both leadership and teamwork contexts.

Goleman's work underscores the importance of developing EI in educational settings, where collaboration, negotiation, and empathy are essential for group work, problem-solving, and interpersonal relationships.

3.5 Adaptability and Resilience

In a world characterized by constant change, adaptability and resilience are indispensable competencies. Learners must be able to cope with uncertainty, handle setbacks, and adjust to new circumstances. Carol Dweck's concept of a "growth mind-set" (2006) is fundamental in this context. A growth mind-set fosters resilience by encouraging students to see challenges as opportunities for growth, rather than as insurmountable obstacles.

4. Implications for Educational Systems

4.1 Curriculum Design and Pedagogical Approaches

To cultivate future skills, educational systems must shift away from traditional, content-heavy curricula and embrace student-centered, inquiry-based learning models. Project-based learning, flipped classrooms, and interdisciplinary approaches have been shown to enhance critical thinking, creativity, and problem-solving skills (Thomas, 2000). Moreover, experiential learning opportunities such as internships, community projects, and global exchanges offer students real-world experiences that hone these competencies.

4.2 The Role of Technology in Education

Technology plays a dual role in education: it is both a tool for learning and a subject of learning. As tools like AI, virtual reality, and gamification are integrated into the classroom, they offer new ways to engage students and foster skills like collaboration, creativity, and critical thinking (Reeves, 2008). At the same time, teaching students how to use and understand these technologies is crucial for preparing them for future job markets.

4.3 Teacher Training and Professional Development

Teachers are at the forefront of educational transformation. Effective teacher training programs must be developed to equip educators with the skills and knowledge required to teach future competencies. This includes training in new pedagogical methods, technological tools, and strategies for fostering skills like emotional intelligence and creativity. Teachers must also become lifelong learners, continually updating their skills to stay relevant in the face of educational and technological advancements (Darling-Hammond, 2006).

5. Challenges and Opportunities

5.1 Equity and Access

One of the major challenges in preparing students for future skills is ensuring that all students, regardless of socio-economic background, have access to quality education. Digital divides, differences in resource allocation, and systemic inequities must be addressed to ensure that all students are prepared for future success (Reardon, 2011). Policies that promote equity in education, such as providing technological resources to underprivileged schools, are essential for closing these gaps.

5.2 Balancing Traditional Skills with Future Competencies

While it is essential to focus on future skills, traditional academic skills like literacy, numeracy, and content knowledge cannot be neglected. The challenge for educators is to balance these foundational skills with the new competencies required for future success. This balance requires careful curriculum design and assessment models that measure both content mastery and skill development.

Conclusion

As society and technology evolve, so too must education. Future skills and competencies, including digital literacy, critical thinking, creativity, emotional intelligence, and adaptability, are essential for preparing students for a rapidly changing world. Educational systems must adapt by rethinking curriculum design, integrating technology, and providing comprehensive teacher training. While challenges remain, particularly in ensuring equitable access to these future skills, the opportunities for creating a more dynamic, responsive, and inclusive education system are vast.

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INNOVATIVE TEACHING PRACTICES IN SECONDARY EDUCATION

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Abstract

The 21st century is a creative and disastrous time. India requires a vast amount of educated labor. The most effective ways to enhance the necessary abilities for teachers and students must be found because the conventional teaching and learning approach is out of date. To promote long-lasting and employability skills, there is an urgent need to shift methodology from fact-based traditional lecture to interactive education. Teaching and learning innovation are now crucial to solving this issue. Using the many approaches and strategies that are discussed in the paper will assist in achieving the intended result. This article outlines the unique approaches of instruction that the nation's secondary education institutions are implementing.

Keywords: Conventional Teaching Methods, Innovative Teaching Methods, Secondary Educational Institutions

INTRODUCTION:

Generally speaking, education is essential to the formation of a skilled labor force. Any society's ability to grow and flourish depends on its educational system. It is in charge of creating human capital, which propels and sets technological innovation and economic development. It also conveys knowledge, skills, and values. Information and knowledge are particularly significant and essential components for human existence and progress in the twenty-first century. In the information age, education serves as both a tool for societal growth and a catalyst for progress thanks to its research and knowledge-based capabilities.

Many academics have used teaching effectiveness methodologies to evaluate traditional teaching methods, and their findings indicate that many students find it difficult to retain course material when taught through traditional lecture methods. It is discovered that when instruction is provided by text book lectures, the majority of pupils do not retain the material to the required degree. Therefore, it is now necessary to improve the current teaching and learning methodologies and to teach using fresh, creative approaches. Finding the gaps in the teaching-learning process and putting new teaching strategies into practice have become essential. Globally, educators are pushing for both trying out new teaching philosophies and for enhancing and developing the currently used teaching techniques. According to Naz and Murad (2017), teachers that employ creative teaching strategies can improve the academic performance of pupils from diverse backgrounds. Students must acquire new skills and information due to the exponential speed of change in all element of their existence, including employment, technology, culture, lifestyle, and environment.

Despite ongoing criticism, attacks, and attempts to suppress lecturing in preference to more effective techniques and protocols, lecturing has up until now been the most popular style of academic instruction. Numerous higher education institutions have attempted to implement and test modifications to their teaching methodologies, and a great deal of research has been done in this area. According to research by Ganyaupfu (2013), the teacher-student interactive method excelled the teacher-centered approach in terms of effectiveness. These studies demonstrate that while direct instruction is effective

at imparting knowledge, it falls short when it comes to deeper comprehension, creative problem-solving, and understanding. Innovative teaching is centered around the belief that all students possess the ability to learn and achieve achievement.

Every student should be seen by a teacher as having distinct personality traits that can be enhanced through the use of revolutionary instructional strategies. Teachers can recognize the issues pupils are having by being highly aware of the learning process. The primary goal of developing innovative teaching and learning methods is to have every student engage in active learning rather than merely listening and sitting still, permitting them to absorb the greatest amount of information in the shortest amount of time.

INNOVATIVE TEACHING

Numerous secondary education institutions have attempted to implement and test modifications to their teaching methodologies, and a great deal of research has been done in this area. As everyone knows, education is a powerful tool for bringing about social change and elevating every member of the community. However, the only way to improve the quality of education is to implement creative teaching strategies that will both engage students and inspire them to study.

Innovative teaching uses technology to enhance traditional teaching methods, giving faculty members a fulfilling teaching experience as well as students a rich learning experience (Khairnar, 2015). The increased level of globalization has made it necessary for educators to be able to adjust to new technology developments and fulfill the demands of solving challenging situations. In order to meet this challenge, active teaching and learning strategies are needed, with a focus on connecting theory to practical applications that support the for pupils to comprehend the course material. Students must assess project situations with a wide range of external and internal factors using these active approaches, which call for both technical and non-technical abilities during the solution process. Therefore, the application of active approaches enhances comprehension of foundational ideas, promotes in-depth and imaginative learning, and fosters the growth of communication and collaborative abilities.

IMPORTANT INNOVATIVE TEACHING METHODS

Application of Multimedia tools

Multimedia communication is the most effective mode of communication in the current digital era. Combining different digital media types—text, graphics, audio, and video—to teach pupils is a strategy that many teachers are using successfully, and it has been proven to be a very effective method of knowledge transmission. There is a discrepancy between what employers require and what students are taught as a result of traditional educational systems. Many higher education institutions have embraced problem-based learning as a means of fostering students' creativity and analytical problem-solving skills. Multimedia tools effectively enhance problem-based learning, which has a positive effect on the learning environment. The use of multimedia technologies by the instructor enables more meaningful representation (Jayashree (2017). Course material presentations are created using multimedia technologies in accordance with the needs of the students. The audio-visual material is presented in a way that encourages students to pay attention to what is being presented and remember it for longer periods of time. Power Point presentations, instructional videos on U Tube, Gyan Darshan

broadcasts, NPTEL video lectures, SWAYAM courses, MOOCs, and other technologies are examples of multimedia technology.

Role Playing

Using role playing as a strong method, students can apply content immediately since they are putting themselves in the role of decision makers who have to make decisions regarding the creation of policies and the best use of available resources. Using this method is a great way to get students interested in the work at hand and provide them the chance to collaborate with their classmates while attempting to do the assignment allocated to them in their designated capacity. As students have a deeper understanding of the material, role-playing techniques can help teachers better accomplish learning objectives. Students benefit from improved cooperation and teamwork as a result of this. Using the role-playing method of teaching and learning, many classroom issues can be resolved and interpersonal relationships can be strengthened. One excellent method for teaching complicated concepts in a simplified manner is through role-playing. Through their personal involvement, role acting aids in the academic learning of the students. Role acting has shown to be a successful tool for many educators in the classroom for teaching interpersonal skills and resolving conflict between students. Dramatizing events through role-playing can be an excellent way to understand literature and historical and contemporary events. Students can develop interpersonal relationships with one another through role-playing. (a) Perform in social situations. (b) How he views himself and his lifestyle; and (c) How academic content can be relevant to his day-to-day activities.

Many institutions have employed role playing as a way to improve communication and learning among faculty, pupils, and administration workers. Social scientists have presented domestic and global issues in universities and other institutions through role-playing techniques.

 The primary benefit of role playing as a teaching method is its interactive aspect. Participants talk about new behavioral patterns and alternative role-playing techniques in addition to theoretical issues with conduct. As a result, the importance of active learning is emphasized, which improves learning general. In the classroom, role playing helps to establish the essential link between understanding a concept and applying it. Interpersonal issues in the classroom are only fixed when teachers or students start acting differently. Merely adding more material does not solve interpersonal problems or teach new social skills.

Role playing is therefore one method in an educational process aimed at the empirical enhancement of social behavior and classroom learning. Such a process makes the assumption that education must come from practical experience. In the classroom, concepts are translated into activities and theory into practice. It could turn into an opportunity for identifying issues, gaining experience, analyzing data, and coming to conclusions.

Flipped Class Room

A practical teaching approach is the main focus of education in a traditional classroom or learning setting. After a lecture by the teacher in front of the class, homework assignments and problem-solving activities are completed at home. An organized sequence of events is "flipped" in a flipped classroom. Before classes begin, students can browse and review texts, videos, or online lectures as a means of obtaining educational material and instructional content at their own leisure. The remainder

of the class period is devoted to more engaged learning activities, such as interactive case studies, problem solving, or group discussions, all with the assistance of the instructor. When students use what they have learned in class or do homework in a traditional learning environment, it is typically at home. However, because this work is being done in the classroom in a flipped learning environment, the instructor or other professional educator is available to answer questions when students are applying new knowledge and concepts. Flipped classrooms offer an additional benefit in that students can go over lecture content at their own leisure and repeat sections of the lecture as many as necessary. Additionally, it enables students to watch the lecture material even if they were absent from class.

Active Learning

Since active learning is student-centered rather than teacher-centered, it requires more than just listening to lectures. Instead, it involves the active engagement, involvement, contribution, and attention of each and every student. Through active learning, students develop their critical thinking and creative skills. As they work on a project, they can reflect on the work they are doing as well as the reason for it.

When students engage with the instructional material in a way that can stimulate critical thinking and pushes them to go beyond simple transcription, they are engaging in active learning. One may utilize a variety of active learning strategies. Active learning can be incorporated into lectures that are already planned, in its most basic form. As such, it can even be applied in significant academic situations

It is a method for analyzing what they have read, composed, considered, and discovered. Active learning is anything done in the classroom that contributes to the course, rather than just watching, listening, and taking notes. Students must organize and prepare their own learning process, engage in the learning process, and regulate, control, and retain the learning activities in order to attain the best possible outcomes.

CONCLUSION

Over the past 20 years, there have been numerous modifications to higher education teaching. While many institutions continue to use traditional teaching methods, a growing number of institutions have embraced revolutionary ways to teaching and learning. Teachers are more likely to use novel teaching techniques as a result of the realization that creativity and innovation are fundamental to learning. Numerous academics have come to the conclusion that implementing cutting-edge teaching and learning strategies has greatly enhanced student performance. Several institutions have also observed that class attendance has increased. Positive feedback on creative teaching strategies has been provided by both teachers and students. Faculty members are using cutting-edge techniques to improve the quality of instruction in order to foster creativity, give individuals more power, and eventually raise our nation's human development index. Innovation is an ongoing affair.

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INTERNATIONALIZATION OF HIGHER EDUCATION IN INDIA: STATUS, CHALLENGES AND OPPORTUNITIES

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Abstract

This article discusses the need and changing wants associated with internationalization of higher education in Indian context. The demand for international education is growing day by day. To cater these needs, institutions have started to take new steps. Besides traditional providers of higher education, new knowledge providers from business houses have started developing innovative models for delivery of higher education. India has certain advantages to expand its internationalization initiative and as a result receiving interests from foreign universities for setting up campuses in the country. India needs to have a policy towards private higher education including foreign universities desirous of setting up campus in India.

Key words: *Internationalization, Higher Education, Globalization, exporting Education*

INTRODUCTION:

The Prime Minister, from the ramparts of Red Fort on 15th August this year, exhorted Indians to think proactively on several fronts. Among them was the question -- why can't India be an exporter of education. That is indeed a new thought. Even while talking about globalization and internationalization of higher education, we do not think in terms of "exporting" education or education services since we tend to connect exports with commodities and not with services. But it is time to start doing so, especially in higher education, because India has the potential to become a global hub in this field.

CONCEPT OF INTERNATIONALIZATION OF HIGHER EDUCATION:

Altbach et al. (2009) define internationalization as the "the variety of policies and programs that universities and governments implement to respond to globalization. These typically include sending students to study abroad, setting up a branch office overseas, or engaging in some type of inter-institutional partnership· Although internationalization of Higher Education is not new, for example Nalanda University attracted scholars from distant places like China, Korea, Turkey, Japan, Tibet, Mongolia, SriLanka and South East Asia more than 1000 years ago; internationalization of education has become increasingly significant in the age of globalization.

Internationalization of Higher Education is associated with a number of social and economic benefits for a country. Economically, internationalization can help increase the inflow of foreign exchange in the country and increase the country's market share in global education exports. However, internationalization can play a larger role in improving the overall quality of Higher Education, increase the global rankings of a country's universities and education system, increase the soft power of a country and most importantly, provide a global atmosphere for students at home which would

enable an exchange of cross-cultural ideas and sensitize the youth of a country to global issues, which is increasingly important in the world we live in today. Although internationalization is often understood in narrow terms and is limited to attracting foreign students, internationalization is a much broader concept, with multiple dimensions to it. Internationalization of education is the process of integrating an international, intercultural and global dimension in the education system. Hence, apart from attracting more foreign students and building partnerships with foreign universities, universities should look at how a global outlook can be incorporated into the education system which can create global citizens.

INTERNATIONAL STUDENT MOBILITY:

Currently USA attracts the greatest number of foreign students and China and India are the largest exporters of foreign students. Engineering and Information & Communication Technologies are the most popular courses pursued by foreign students across countries. With the increase in globalization and internationalization of higher education, there has been an increase in student mobility across the globe. In 200o, there were about 2 million students who were internationally mobile, and this number has more than doubled in less than two decades to5.3million internationally mobile students in 2017. As per the OECD, the number of internationally mobile students is projected to increase to 8 million by 2025. USA, UK, China, Australia, Canada and France are some of the top countries attracting foreign students. Following Figure highlights the top10 countries which attract the maximum number of foreign students.

Table-1: International Student Mobility:

Sl.No	Name of the country	No. of Students mobility from other country
01	USA	10, 95,299
02	U.K	496,570
03	China	492,185
04	Canada	435,415
05	Australia	420,501
06	France	343,400
07	Russia	334,497
08	Germany	282,002
09	Japan	208,901
10	Spain	120,991

All India Survey of Higher Education:

In table -1 depicts that, USA is the most popular destination for foreign students followed by UK, China, Canada, Australia, France, Russia, Germany,, Japan and Spain

Table.no-2: Out bound mobility:

Sl.No	Name of the country	% of Students exporters to others country for Higher education
01	China	33.2%
02	India	17.9%
03	South Korea	5.0%
04	Saudi Arabia	4.1%
05	Canada	2.4%
06	Vietnam	2.2%
07	Taiwan	2.1%
08	Japan	1.7%
09	Mexico	1.4%
10	Brazil	1.3%
11	Nepal	1.2%
12	Iran	1.2%
13	Nigeria	1.2%

All India Survey of Higher Education:

Above table no.2 depicts that, in terms of out bound mobility; China and India emerge as the top exporters of students who study abroad. More than half the international students globally are from these two countries. China constitutes 33.2% of the total number of international students globally, followed by India. India accounts for 17.9% of international students across the world. This is followed by South Korea (5%), Saudi Arabia (4.1%), Canada (2.4%), Vietnam (2.2%), Taiwan (2.1%), Japan (1.7%), Mexico (1.4%), Brazil (1.3%), Nepal (1.2%), Iran (1.2%) and Nigeria (1.2%). Figure 9shows the countries that are major exporters of foreign students.

TOP EXPORTER OF FOREIGN STUDENTS:

In terms of the courses pursued by international students, Engineering and Information & Communications Technology are the most common subjects. Courses in Business and Law are also popular amongst international students in various countries. Table No. 1, shows the percentage of mobile students as a percentage of all the students enrolled in various courses and disciplines in USA, Australia, France, Germany, UK and Canada. These countries are the most popular destinations in terms of attracting foreign students. We see that, Engineering is the most popular course amongst international students in USA and Germany while ICT courses are the most popular amongst international students in Canada, Australia and France. In the UK, Business and Law courses are the most popular amongst international students.

IN BOUND STUDENT MOBILITY TO INDIA:

Currently India attracts only 1% of the total number of internationally mobile students. India attracts the maximum number of foreign students from Nepal, Afghanistan and Bangladesh. Karnataka attracts the highest number of international students coming to India. Currently India attracts only 1% of the total number of students who study abroad. In 2018-19, India received 47,427 foreign students for higher education studies. The students came from 164 countries. Table-3, shows the top 10 countries which send foreign students to India. Although India receives students from 164 countries, 65% of the total foreign students coming to India are from ten countries. Our

neighbors- Nepal, Afghanistan, Bangladesh, Bhutan and Sri Lanka contribute to over 48% of the foreign students coming to India. In terms of inbound student mobility, India ranks 26th globally.

Table-3: Top countries to which foreign students are coming to india:

Sl.No	Name of the country	% of Students mobility from other country to India
01	Nepal	26.9%
02	Afghanistan	10.1%
03	Bangladesh	4.5%
04	Sudan	4.1%
05	Bhutan	3.9%
06	Nigeria	3.5%
07	USA	3.3%
08	Yemen	3.2%
09	Srilanka	2.7%
10	Iran	2.4%

All India Survey of Higher Education:

From the above table.no.3, we see that India is a popular education destination for our neighboring countries and some African countries. India attracts the maximum number of foreign students from Nepal (12,747), contributing to 26.9% of the foreign students coming to India. After Nepal, India attracts the maximum number of foreign students from Afghanistan followed by Bangladesh, Sudan, Bhutan, Nigeria, USA, Yemen, Srilanka and Iran.

DISTRIBUTION OF INTERNATIONAL STUDENTS IN INDIA:

Karnataka attracts the maximum number of foreign students coming to India. Amongst the states, Karnataka attracts the maximum number of foreign students in India. In2018-19, 21.1% of the foreign students that came to India, studied in Karnataka (10,023). Maharashtra attracted the second highest number of foreign students (10.5%), followed by Punjab (9.5%), Uttar Pradesh (9.5%) and Tamil Nadu (8.6%). The state wise distribution of inbound international students to India is shown in table no.4.

Table.no-4: State Wise Distribution of International Students in India.

Sl.No	Name of the State	% of Students mobility from other country to Indian states
01	Karnataka	21.7%
02	Maharashtra	10.5%
03	Punjab	09.6%
04	Uttar Pradesh	09.5%
05	Tamil Nadu	08.6%
06	Haryana	06.5%
07	Delhi	04..5%

All India Survey of Higher Education:

Although Karnataka receives the maximum number of foreign students comes to India, the number of students coming to India is declining when compared to the previous year. The table below displays the number of students coming to India in 2018-19 and 2017-18 for selected states in India which are the most popular destinations for foreign students coming to India. The numbers in brackets indicate the share of foreign students coming to the state as a percentage of total foreign students coming to India.

Major recommendations of the NEP with regard to internationalization are as follow:

- ➤ Provide low-cost, quality education to attract international students.
- ➤ Simplified visa and Foreigner Registration Regional Office processes and internship policies for international students.
- ➤ Additional funds for Indian universities that aim to become attractive destinations for international students to develop specially designed courses. Special schemes that offer research scholarships to students from developing countries.
- ➤ Twinning, international research partnerships and more MoUs for mutual recognition of degrees will be encouraged.
- ➤ Global immersion programs for Indian students.
- ➤ Public and private Indian universities that meet specified eligibility criteria will be encouraged to set up campuses in select countries particularly in the global South
- ➤ Select universities (those from among the top 200 universities in the world) would be permitted to operate in India. A legislative framework facilitating such entry would be put in place.

OPPORTUNITIES AND CHALLENGES:

Following are the some of the opportunities in internationalizing higher education in India.

- ➤ Enhanced capacity,
- ➤ greater access for students,
- ➤ development of joint curriculum,
- ➤ greater diversity of programmes,
- ➤ exposure to a variety of teaching and learning methods,
- ➤ growing comparability of qualifications,
- ➤ exposure to established systems of education administration and management,
- ➤ less bran-drain of gifted and bright students to foreign institutions,
- ➤ fusion of cultures,
- ➤ exchange of research ideas and enhancement of research capacity,
- ➤ Establishment of multinational and cross disciplinary team and generation of new academic environments are some of the opportunities that internationalization offers.

The recent example of India's mission to Mars 'Manglayaan' is a fitting testimony of the type of opportunities that India offers to the world.

Following are the some of the challenges and risks in internationalizing higher education in India.

- ➤ quality of provision,
- ➤ high fees leading to an elitist provision,
- ➤ Inequality of access leading to a two-tier system which is inconsistent with the equity and access drivers of the nation's higher education policy.
- ➤ Important factors in any collaborative arrangement are issues relating to the award of degrees and the determination and approval of the quality assurance systems and procedures used to approve and accredit the qualifications.
- ➤ Equally important are also issues of international mobility and credit transfer of the qualifications awarded.

Following are the some of the Issues in internationalizing higher education in India.
- ➢ Issues related to curriculum delivery,
- ➢ quality of teaching,
- ➢ relevance of course content,
- ➢ Learning and teaching strategies used and offer programmes that are both globally and locally relevant.
- ➢ New approaches to pedagogy and curriculum development and an ongoing focus on quality that goes beyond simple audit and accreditation is required.

ACTIONPLANFORINTERNATIONALIZATION OF HIGHER EDUCATION IN KARNATAKA:
- ➢ Maximizing the potential benefits from internationalization of higher education would require a deliberate and sustained effort from all stakeholders involved.
- ➢ New ways of thinking and management are required to address the complexities of Indian higher education.
- ➢ In particular, governance structures would need to be reformed. Neither a centralized bureaucratic structure nor one based purely on market forces would work.
- ➢ Setting Vision for Internationalization of Higher Education
- ➢ Budgetary allocation to selected universities to promote internationalization
- ➢ Setting up of online website (multilingual) that provides information about studying in Karnataka
- ➢ Provision of scholarships for international students
- ➢ NRI quotas (especially for Medical Education) to enable promotion of universities through word of mouth.
- ➢ Allowing transfer of credits between universities, articulation agreements for allowing recognition of Indian degrees/certificates in other countries.
- ➢ Evolving course offerings including opportunities for internships with MNCs.
- ➢ Setup Project Management Unit(PMU) for implementation of above actions.

CONCLUSION:

There is no denying that globalization is way of life in the 21st century. Though not all higher education institutions will be global in nature, none can exist in isolation from the ever expanding global higher education environment. It is time that higher education policy in India reflects on how best to benefit from the country's 'demographic dividend' and leverage on internationalization. Internationalization could help promote academic quality, integrity, diversity, access, and relevance and enhance capacity but only when managed effectively within a set of clear and transparent policies and regulatory arrangements. The creation of world class universities and a culture of academic excellence can only benefit the 140 million Indian students who can participate and engage in higher education.

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INNOVATIVE TEACHING PRACTICES AND METHODOLOGIES IN EDUCATION: HARNESSING THE POWER OF EXPERIENTIAL LEARNING

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INTRODUCTION

The education sector is continuously evolving, driven by changes in society, technology, and the global economy. As educators strive to equip students with skills for the 21st century, it becomes imperative to explore innovative teaching practices that go beyond traditional methodologies. One such approach is experiential learning, which places the learner at the centre of the educational process, encouraging active engagement and personal reflection to enhance understanding and knowledge retention. This seminar focuses on the importance of innovative teaching practices, particularly experiential learning, and its role in reshaping education. It aims to provide educators with practical strategies and insights for integrating experiential methodologies into their curricula, fostering a deeper, more meaningful learning experience for student. The traditional education system, primarily centred on rote learning and theoretical approaches, has seen a steady evolution in recent years. With the advent of technology and an ever-growing body of research into educational psychology and pedagogy, there has been a shift towards methods that engage students more actively in the learning process. One such approach that is gaining prominence is experiential learning. This seminar will explore innovative methodologies in education with a particular focus on experiential learning, investigating how it can be harnessed to foster deeper understanding, engagement, and long-term retention of knowledge among students.

SECTION 1: THE NEED FOR INNOVATION IN EDUCATION.

1 Challenges in Traditional Education

For decades, the traditional education model has been predominantly lecture-based, with a focus on rote memorization and standardized testing. While this method has produced generations of educated individuals, it has several limitations in today's rapidly changing world.

Key challenges include:

Passive Learning: Students often play a passive role, absorbing information without active engagement or critical thinking.

Limited Critical Thinking: The overemphasis on memorization leaves little room for the development of problem-solving, analytical, and critical thinking skills.

Disconnection from Real-World Applications: Traditional education can sometimes fail to show students the relevance of their learning to real-world problems and solutions. These challenges point to the need for educational systems to adopt more dynamic, student-cantered teaching practices that actively engage learners and foster essential life skills.

1.2 The Push for Innovation

In response to these limitations, educational theorists and practitioners have called for innovative approaches that address the changing needs of students and society. This includes leveraging technology, fostering creativity, and emphasizing skills such as collaboration, communication, and adaptability. Experiential learning is one such innovative approach that bridges the gap between theory and practice, enabling students to learn through doing, reflecting, and applying their knowledge to real-world situations.

SECTION 2: UNDERSTANDING EXPERIENTIAL LEARNING

2.1 What is Experiential Learning?

Experiential learning is a student-centred approach that involves learning through direct experience and active participation. This method, rooted in the theories of educational psychologists such as John Dewey, David Kolb, and Jean Piaget, posits that learning is most effective when students are directly involved in the process.

Understanding Experiential Learning At its core, experiential learning is the process of learning through experience. It is more than simply learning by doing; it involves reflecting on the experience, conceptualizing the learning process, and then applying it in new contexts. The key premise is that knowledge is constructed through the transformation of experience, rather than passively receiving information. This concept was first popularized by David Kolb in his Experiential Learning Theory (1984).

Kolb emphasizes that effective learning occurs when a learner progresses through all four stages, allowing them to both experience and critically analyse their learning process. The Role of Experiential Learning in Modern Education The shift towards experiential learning methodologies in modern education is rooted in a growing recognition that learners thrive in environments that actively engage them.

Kolb's Experiential Learning Cycle provides a framework for this approach, emphasizing four stages:

Concrete Experience: Engaging in a new experience or reinterpreting a previous experience. Engaging in an activity or task.

Reflective Observation: Reflecting on the experience from various perspectives.

Abstract Conceptualization: Forming generalizations or theories based on the reflection.

Active Experimentation: Applying the new understanding to real-life situations.

Research has shown that experiential learning fosters:

Deep Learning: It encourages students to engage with content on a deeper level, moving beyond surface memorization towards genuine understanding.

Critical Thinking: By reflecting on their experiences, students develop critical thinking and problem-solving skills.

Adaptability: Experiential learning prepares students to apply knowledge in real-world contexts, thus improving their ability to adapt to new situations. Moreover, experiential learning aligns with the growing need for education to produce graduates who are not just knowledgeable but also capable of innovation, creativity, and leadership in their fields.

2.2 The Role of Reflection

Central to experiential learning is the process of reflection. Reflection allows learners to critically analyse their experiences, make sense of them, and draw meaningful conclusions that can be applied to future situations. This reflection phase helps students connect abstract concepts to concrete experiences, making learning more personal and relevant.

SECTION 3: BENEFITS OF EXPERIENTIAL LEARNING

Experiential learning offers numerous benefits that align with the needs of modern learners. These advantages make it a powerful tool for educators looking to innovate their teaching methodologies.

3.1 Active Engagement

Experiential learning promotes active engagement by requiring students to participate in the learning process. This active involvement increases motivation and interest, leading to deeper understanding and better retention of information.

3.2 Development of Critical Skills

Through experiential learning, students develop a wide range of skills essential for success in the 21st century, including: Critical Thinking and Problem-Solving: Engaging with real-world scenarios requires students to think critically and come up with solutions to complex problems. Collaboration and Communication: Many experiential learning activities, such as group projects, simulations, or role-playing, encourage teamwork and communication. Adaptability: Experiential learning often presents unpredictable challenges, helping students learn to adapt to new and evolving circumstances.

3.3 Increased Retention and Understanding

Research shows that experiential learning leads to better retention of knowledge compared to traditional teaching methods. By connecting learning to real-life experiences, students are more likely to remember and apply what they have learned.

3.4 Fostering a Growth Mindset

Experiential learning encourages a growth mindset, where students understand that failure is part of the learning process. By engaging in hands-on activities and reflecting on mistakes, students learn resilience and perseverance.

SECTION 4: INNOVATIVE APPROACHES TO EXPERIENTIAL LEARNING

There are several ways educators can incorporate experiential learning into their teaching methodologies. The following sections will explore a few key strategies that are proving effective across different educational contexts.

4.1 Project-Based Learning (PBL)

Project-Based Learning (PBL) is an instructional approach that challenges students to work on long-term, multidisciplinary projects. These projects are designed to solve real-world problems, encouraging critical thinking, creativity, and collaboration. PBL is a key aspect of experiential learning, as it allows students to take ownership of their learning, explore topics deeply, and connect their education to practical outcomes. Project-Based Learning (PBL) is one of the most popular forms of experiential learning. In PBL, students work on real-world projects over an extended period, allowing them to deeply engage with a topic, problem, or challenge.

Key Features:

Inquiry-based: PBL starts with a question or challenge that drives students to explore and investigate. Interdisciplinary: PBL often integrates multiple subjects, encouraging students to see connections between different areas of study.

Collaborative: It often involves teamwork, enhancing communication and cooperation skills.

Authentic Assessments: The final product is a tangible outcome, which can be a presentation, a physical product, or a solution to a problem, assessed based on its relevance to real-world applications.

Benefits of PBL: Encourages students to take ownership of their learning. Develops skills such as time management, research, critical thinking, and collaboration. Provides opportunities for students to apply what they have learned in a meaningful way.

Challenges: It can be difficult to assess students fairly, as projects often involve multiple collaborators. Teachers must provide adequate support and guidance without stifling creativity or independence.

4.2 Service Learning

Service learning combines community service with academic coursework, allowing students to apply their learning in meaningful ways that benefit society. This method encourages students to become active citizens while simultaneously gaining practical skills and a deeper understanding of their subjects. Service Learning is a teaching strategy that combines community service with instruction and reflection. By participating in service projects, students learn about societal issues and their role in addressing them.

Key Features:

Community Engagement: Students engage in activities that address community needs. Reflection: Reflection is a crucial component where students think critically about their experiences and the lessons learned. Linking

Theory to Practice: It helps students understand theoretical concepts by applying them in real-world contexts.

Benefits of Service Learning: Encourages civic responsibility and a sense of social justice. Provides hands-on experience in fields such as public health, education, and environmental conservation.

Strengthens empathy and emotional intelligence as students work with diverse populations. Challenges: Designing meaningful service opportunities that align with curricular goals can be complex. Logistical challenges, such as transportation and scheduling, can make it difficult to implement service-learning initiatives.

4.3 Simulations and Role-Playing

Simulations and role-playing exercises immerse students in lifelike situations, requiring them to apply their knowledge and make decisions in real-time. These methods are particularly useful in fields such as business, law, and medicine, where students must practice decision-making in high-pressure environments. Simulations and role-playing provide students with immersive experiences that replicate real-world scenarios, allowing them to practice skills, test theories, and make decisions in a safe environment.

Key Features: Simulations: These can range from business simulations, medical simulations, to engineering simulations, where students mimic professional environments. Role-Playing: Students

assume specific roles within a scenario, such as a diplomat negotiating a treaty, allowing them to experiment with different viewpoints.

Benefits: Allows students to develop practical skills in a controlled, risk-free setting. Fosters critical thinking and decision-making under pressure. Encourages empathy by placing students in different roles and perspectives.

Challenges: Requires significant preparation and resources to create realistic simulations. Some students may find it difficult to engage with role-playing activities if they feel uncomfortable stepping outside their comfort zone.

Flipped Classroom

The flipped classroom model reverses the traditional learning environment by delivering instructional content outside of class (usually online) and moving homework-style activities into the classroom. This structure enables students to engage in experiential learning during class time.

Key Features: Pre-Class Preparation: Students watch lectures or read material at home. In-Class Activities: Classroom time is spent on hands-on activities, problem-solving, and group work.

Benefits: Frees up classroom time for interactive, experiential activities. Encourages active learning, as students come to class prepared to engage in deeper discussions and practical applications. Provides flexibility for students to learn at their own pace outside of class.

Challenges: Requires significant preparation by teachers to ensure students complete pre-class work. Relies heavily on students having access to technology and resources outside of school.

4.5 Design Thinking

Design Thinking is an iterative problem-solving methodology that emphasizes creativity, empathy, and experimentation. It encourages students to approach problems from the user's perspective and develop innovative solutions.

Key Features: Empathy: Understanding the needs and experiences of users. Ideation: Generating creative ideas and solutions. Prototyping and Testing: Building and refining models or products based on feedback. Benefits: Encourages creativity and innovation. Provides a structured process for problem-solving that can be applied across disciplines. Develops resilience, as students learn to iterate and improve through trial and error.

Challenges: Requires a mindset shift for both teachers and students, as it involves tolerating ambiguity and failure. Implementation can be resource-intensive, particularly when prototyping physical products.

Outdoor and Adventure Education

Outdoor education incorporates experiential learning by taking students outside the traditional classroom to learn in natural settings. This can include activities such as wilderness expeditions, camping, and environmental science projects.

Key Features: Connection to Nature: Students engage with the natural environment to develop an understanding of ecological systems. Physical Challenges: Adventure activities that push students to develop physical and emotional resilience.

Benefits: Enhances physical and mental well-being through outdoor activities. Builds teamwork, leadership, and personal responsibility. Provides a hands-on, immersive experience of subjects like biology, ecology, and geography.

Challenges: Safety concerns and the need for trained facilitators. Can be limited by   geographic location or financial constraints.

Incorporating Technology in Experiential Learning Technology is a powerful enabler of experiential learning. Virtual reality (VR), augmented reality (AR), and artificial intelligence (AI) offer students immersive, interactive experiences that were previously impossible.

Virtual Reality (VR): VR allows students to experience historical events, scientific processes, or engineering challenges in a highly immersive environment. For example, students studying ancient history could walk through a VR simulation of a Roman city.

Augmented Reality (AR): AR enhances the physical world by overlaying digital information, enabling students to interact with 3D models of complex systems like the human body or planetary systems.

Artificial Intelligence (AI): AI-powered adaptive learning platforms personalize the learning experience by responding to individual student needs and providing real-time feedback. The integration of technology in experiential learning not only makes learning more engaging but also prepares students for the digital future.

Challenges of Implementing Experiential Learning While the benefits of experiential learning are clear, there are also challenges that educators and institutions must address to fully implement these methodologies: Time and Resource Constraints: Experiential learning often requires more time, materials, and preparation compared to traditional lectures. Teachers need sufficient planning time and institutional support to develop meaningful experiential activities. Assessment: Assessing experiential learning can be complex. Traditional tests may

4.4 Fieldwork and Internships

Fieldwork and internships provide students with direct experience in professional environments. These opportunities allow students to apply classroom knowledge in real-world settings, gaining hands-on experience and valuable insights into their chosen career paths.

SECTION 5: STRATEGIES FOR IMPLEMENTING EXPERIENTIAL LEARNING IN THE CLASSROOM

While the benefits of experiential learning are clear, integrating this approach into existing curricula requires thoughtful planning and execution. Here are some practical strategies for educators:

5.1 Start Small

For educators new to experiential learning, it is essential to start small. Begin by incorporating experiential components into a single lesson or unit before expanding to more extensive projects. For example, educators can introduce role-playing activities or case studies into classroom discussions.

5.2 Use Real-World Problems

To make learning more relevant, incorporate real-world problems that students are likely to encounter outside the classroom. These problems can be drawn from current events, local community issues, or challenges in specific industries.

5.3 Encourage Reflection

Reflection is a crucial component of experiential learning. After each experiential activity, allow students time to reflect on their experiences, either through group discussions, journals, or presentations.

Encourage them to consider what they learned, how they applied their knowledge, and how they can improve in the future.

5.4 Facilitate Group Work

Many experiential learning activities are most effective when done in groups. Group work fosters collaboration, communication, and critical thinking, essential skills for success in both academia and the workplace. Educators should create opportunities for students to work together on projects, solve problems, and reflect on their learning.

5.5 Use Technology to Enhance Experiential Learning

Incorporating technology into experiential learning can expand the possibilities for hands-on learning. Virtual reality (VR), simulations, and online collaboration tools can provide students with immersive experiences that may not be possible in a traditional classroom setting.

SECTION 6: OVERCOMING CHALLENGES IN EXPERIENTIAL LEARNING

Despite its numerous benefits, implementing experiential learning can present challenges. Educators must be prepared to address these issues to ensure the success of experiential learning programs.

6.1 Time Constraints

One of the most common challenges in experiential learning is time. Projects, fieldwork, and reflective activities can be time-consuming, and educators may struggle to fit these activities into already-packed curricula. To overcome this challenge, educators can streamline experiential learning activities by aligning them with curriculum goals and learning outcomes.

6.2 Assessment of Experiential Learning

Assessing experiential learning can be challenging, as it often involves subjective experiences and qualitative outcomes. To address this, educators can use rubrics that focus on both the process and the product, assessing students' ability to reflect on their experiences, apply their knowledge, and demonstrate critical thinking.

6.3 Student Resistance

Some students may resist experiential learning, particularly if they are accustomed to more traditional, passive learning environments. To mitigate this resistance, educators should clearly communicate the benefits of experiential learning and provide ample support throughout the process.

SECTION 7: CASE STUDIES AND SUCCESS STORIES

7.1 Case Study: STEM Education and Experiential Learning

In many STEM (Science, Technology, Engineering, and Math) disciplines, experiential learning has proven particularly effective. For example, engineering students may participate in design-build projects, where they design, build, and test prototypes. This hands-on approach allows them to apply theoretical knowledge to real-world problems, enhancing both their technical skills and their understanding of engineering principles.

7.2 Case Study: Experiential Learning in Humanities

Experiential learning is not limited to STEM fields. In the humanities, students might engage in service-learning projects that connect their academic work to social justice issues. For example, literature students could collaborate with community organizations to address literacy challenges, applying their understanding of literature to create accessible reading programs.

7.3 Case Study: Experiential Learning in Business Education

In business schools, experiential learning is often incorporated through internships, consulting projects, and simulations. For example, students in a marketing course might be tasked with developing a real marketing campaign for a local business, applying theoretical marketing principles to a practical context.

CONCLUSION

In conclusion, the seminar on "Innovative Methodologies in Education: Harnessing the Power of Experiential Learning" highlighted the transformative potential of experiential learning in modern education. By integrating hands-on, real-world experiences into the curriculum, students gain deeper understanding, critical thinking skills, and practical knowledge. The shift from traditional, passive learning to an active, student-centred approach encourages collaboration, creativity, and engagement. It equips learners with essential life skills, such as problem-solving and adaptability, preparing them for the demands of an ever-evolving world. Ultimately, experiential learning is not just a supplement but a vital methodology for fostering holistic, lifelong learning.

INNOVATIVE TEACHING METHODS IN SECONDARY EDUCATION AND ITS BENEFITS FOR PREPARING TEACHERS FOR FUTURE TRENDS IN EDUCATION

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Abstract

Innovative teaching approaches in secondary education serve an important role in altering traditional pedagogy, preparing both teachers and students for future academic and professional challenges. This research investigates how several innovative techniques, such as technology integration, experiential learning, individualized education, and collaborative methods, can improve student engagement, critical thinking, and creativity. In India, notably in Karnataka, many schools are employing flipped classrooms, project-based learning (PBL), and inclusive education practices to encourage personalized learning environments. These strategies not only encourage academic success, but they also help students acquire important life skills like communication, problem-solving, and flexibility. Furthermore, professional development programs such as Continuous Professional Development (CPD) and Professional Learning Communities (PLCs) help teachers embrace and facilitate these new teaching techniques. While novel methods have numerous advantages, like greater student participation, retention, and emotional intelligence, they also present obstacles. Resistance to change, limited resources, and the need for continual teacher training are common roadblocks. Nonetheless, by embracing contemporary technologies such as artificial intelligence (AI), virtual reality (VR), and social-emotional learning (SEL), educators can foster a dynamic, inclusive, and future-ready educational environment. This article proposes for a transition from teacher-centered to student-centered learning in secondary school to ensure that students are not just taught knowledge but also prepared to manage an increasingly complicated and changing environment.

Keywords: *Innovative Teaching Methods, Education, Benefits, Future Trends, Education*

1.   Introduction

Education is the bedrock of society growth, propelling advances in technology, the economy, and social development. Traditional teaching approaches, which rely on lectures and rote memorization, fall short of helping students develop critical thinking and problem-solving skills. To flourish in today's fast changing environment, students need a comprehensive education that includes practical skills, creativity, and critical thinking. Innovative pedagogical methodologies provide a solution by changing secondary education into a more immersive, interactive, and collaborative experience that builds 21st-century abilities.

The Need for Innovative Teaching

Traditional secondary education frequently depends largely on lectures, resulting in passive learning and little student participation. To close the gap between theory and practice, innovative teaching methods emphasize student participation, collaboration, and hands-on learning. These strategies improve students' understanding, retention, and creative problem-solving skills, preparing them for future academic and professional problems.

In today's quickly changing educational scene, teachers must adapt to changing student requirements. To address this, educators in Karnataka, India, are embracing a variety of instructional methodologies that promote critical thinking, creativity, and adaptability. This essay investigates the

new teaching methods being introduced in Indian schools, focused on Karnataka, and how these approaches equip teachers to fulfill the expectations of future education.

1.   Technology Integration in Classrooms

In the twenty-first century, incorporating technology into education has become critical. Schools in Karnataka are embracing digital transformation with smartboards, iPads, and online resources. The flipped classroom concept, which involves students learning online and participating in interactive conversations in class, is gaining popularity. This technique increases student involvement and enables teachers to transition from traditional methods to student-centered, technology-driven environments.

Teacher training programs emphasize the integration of technology and pedagogy, allowing educators to successfully use digital resources to promote learning. As technology advances, teachers must stay up to date on technologies such as AI-powered personalized learning, virtual reality classrooms, and gamified education to prepare for future trends.

Benefits for Students

➢ **Increased Accessibility:** Technology provides diverse resources that cater to various learning styles and needs.

➢ **Engagement and Motivation:** Interactive technologies increase student participation and motivation in lessons.

➢ **Personalized Learning:** Technology can help teachers tailor education to individual students' needs and pace.

➢ **Preparation for Future Technologies:** Students gain skills in digital tools to prepare for modern workplaces.

2.   Experiential Learning and Project-Based Learning (PBL)

Experiential learning focuses on hands-on activities and real-world applications of information. Project-Based Learning (PBL), a popular kind of experiential learning, allows students to work on real-world problems while developing critical thinking and problem-solving skills. Many Karnataka schools, particularly urban schools, have embraced PBL to engage students in learning through community-based or environmental initiatives.

PBL requires teachers to alter their mindset from knowledge delivery to facilitation of student-driven inquiry. Teacher training programs in Karnataka are increasingly emphasizing on how to create and implement PBL, preparing teachers to assist students through complex problem-solving assignments. This type of instruction prepares instructors and students for a future in which adaptability and collaboration are critical.

Benefits for Students

➢ **Real-World Application:** Students study by engaging with real-life challenges, making education relevant and practical.

➢ **Development of Critical Skills:** Develops critical thinking, problem solving as well as research skills through hands-on projects.

➢ **Increased Retention:** Learning via experience often leads to improved retention of informations.

➢ **Student Empowerment:** Encourages autonomy along with ownership of learning, promoting self directed learners.

3.   Inclusive and Differentiated Instruction

In India, particularly in Karnataka, classrooms are growing more diverse in terms of student learning abilities, backgrounds, and needs. Inclusive education emphasizes modifying teaching approaches to accommodate all students, particularly those with special needs. Teachers must be educated in differentiated instruction, which tailors learning experiences to the diverse requirements of students.

Innovative strategies such as Universal Design for Learning (UDL), which allows for multiple modes of involvement, representation, and expression, are being implemented in schools. Karnataka's teacher education programs incorporate these principles, preparing future educators to create inclusive environments that suit all learning styles and abilities. This prepares instructors to address future trends in education, when justice and inclusiveness will be critical to educational progress.

Benefits for Students

➢ **Equity in Learning:** Ensures all learners, regardless of their abilities, have way in to the curriculum.

➢ **Tailored Learning Experiences:** Adapts lessons to competition various student needs, boosting personalized learning outputs.

➢ **Boosts Confidence:** Students obtain support coordinated to their learning styles, improving confidence as well as competence.

➢ **Promotes Social Inclusion:** Fosters a teaching environment that provides diversity as well as inclusion.

4.   Collaborative and Cooperative Learning

Collaborative learning enables students to work together to solve problems, which enhances teamwork and communication skills. Several schools in Karnataka use cooperative learning approaches, which allow students to learn from one another in groups. Teachers serve as facilitators, leading students through their collaborative projects.

Understanding collaborative learning practices is crucial for educators as they prepare for a future in which teamwork and collaboration will be required in both academic and professional settings. Schools in Karnataka are providing professional development programs aimed at enhancing these skills, so that teachers can effectively promote peer learning in their classrooms.

Benefits for Students

➢ **Enhanced Communication capabilities:** Students obtain effective verbal as well as non-verbal communication capabilities while working jointly.

➢ **Teamwork & Leadership:** Students educate to work in groups or teams, taking on diverse roles along with responsibilities.

➢ **Peer Learning:** Students benefit from educating from their peers, which assists reinforce their knowledge of the subject content.

➢ **Social Skills improvement:** Collaboration supports the improvement of social skills namely dispute resolution as well as empathy.

5.   Social-Emotional Learning (SEL)

Social-Emotional Learning (SEL) aims and purpose to develop emotional intelligence, self awareness as well as interpersonal skills in students. This SEL approach is serious in preparing children for future challenges, both personal as well as academic. Numerous schools in Karnataka have implemented SEL programs that stress mental health, empathy, and connection building.

For teachers, SEL training helps them understand the importance of emotional intelligence in education. Teachers learn how to incorporate emotional and social skill development into their regular teaching practices, ensuring that their students are not only academically competent but also emotionally resilient. With the rising emphasis on mental health in education, educators who are skilled in SEL will be better prepared to deal with the emotional and social needs of future students.

Benefits for Students

➢ **Emotional Intelligence:** Students learn ability to understand with manage their emotions, supporting emotional well-being.

➢ **Improved interactions:** SEL improves improved interpersonal relationships, reducing bullying as well as encouraging a helpful classroom atmosphere.

➢ **Increased Resilience:** Students educate coping strategies and boosting their ability to deal with stress as well as adversity.

➢ **Academic Success:** Strong social-emotional skills relate with greater academic performance as well as engagement.

6.   Emphasis on Creativity & Critical Thinking

Preparing students for the future necessitates developing their creativity and critical thinking skills. Schools in Karnataka are increasingly embracing Design Thinking and Inquiry-Based Learning methodologies, which encourage students to ask questions, experiment with new ideas, and solve problems creatively.

Teachers are being taught how to create an inquiry-based environment in which students take responsibility of their learning by asking questions and solving problems creatively. This prepares instructors for a future when creativity and critical thinking will be valued, both of which are essential abilities in a rapidly changing global society.

Benefits for Students

➢ **Encouragement of Innovation:** Foster a culture of creativity and pushing pupils to think outside the box.

➢ **Problem Solving Skills:** Engaging in creative processes boosts students' capacity to approach as well as solve complicated challenges.

➢ **Student Agency:** Students take control of their learning and fostering exploration with inquiry.

➢ **Adaptability:** Encourages flexibility in thinking and preparing pupils to adapt to changing circumstances with obstacles.

7.   Professional Learning Communities (PLCs) and Continuous Professional Development (CPD)

Professional Learning Communities (PLCs) provide a forum for instructors to interact, share best practices, and engage in continuous learning. In Karnataka, many schools are using PLCs as part

of their teacher development programs. Through regular meetings and joint efforts, instructors reflect on their practices, learn from peers, and stay updated on the latest educational trends.

Continuous Professional Development (CPD) is another key part of preparing instructors for future trends. In Karnataka, educational institutions are offering CPD programs that focus on creative teaching practices, leadership abilities, and new pedagogical methodologies. This guarantees that teachers are not just up-to-date with the newest trends but are also lifelong learners who are adaptive to change.

Benefits for Students

➢ **Collaboration among Educators:** PLCs promote a supportive atmosphere for sharing best practices and experiences.

➢ **Ongoing Learning:** CPD guarantees that teachers consistently enhance their skills and knowledge, adjusting to new educational trends.

➢ **Improved Teaching Practices:** Regular cooperation and feedback lead to increased educational strategies and outcomes.

➢ **Professional Growth:** Provides opportunity for teachers to take on leadership roles and responsibilities in their professional path.

Comparison between Traditional Teaching and Innovative Teaching Methods

		Traditional Teaching	**Innovative Teaching Methods**
1		Teacher-Centered Approach:	Student-Centered Approach:
	Focus:	The teacher is the primary authority and knowledge provider, directing the flow of information.	Students are active participants in their learning process, contributing to discussions and activities.
	Student Role:	Students are passive recipients of knowledge, often expected to memorize information.	Encourages critical thinking, inquiry, and collaboration among students.
2.		Lecture-Based Instruction:	Interactive and Experiential Learning:
	Format:	Lessons typically consist of lengthy lectures with minimal interaction.	Incorporates hands-on activities, group projects, and discussions to facilitate learning.
	Assessment:	Evaluations often rely heavily on rote memorization and standardized tests.	Uses diverse assessment methods, including project work, presentations, and peer evaluations.
3.		Limited Use of Technology:	Technology Integration:
	Tools:	Minimal integration of technology; reliance on textbooks and blackboards.	Incorporates digital tools and platforms (smartboards, online resources, educational apps) into the learning process.
	Resources:	Limited access to online resources or multimedia tools for learning.	Provides access to a wide range of multimedia resources that enhance engagement and understanding.
4.		Rigid Curriculum:	Flexible Curriculum:

		Traditional Teaching	Innovative Teaching Methods
	Structure:	Curriculum is often standardized with little flexibility to adapt to students' needs or interests.	Allows for adaptability in teaching methods and content to meet diverse student needs and interests.
	Content:	Emphasis on theoretical knowledge with less focus on practical applications.	Emphasizes real-world applications and critical thinking, encouraging students to connect learning with their environment.
5.		Discipline and Control:	Collaboration and Community:
	Classroom Management:	Emphasis on discipline and control over student behavior.	Focuses on collaboration, peer learning, and building a supportive learning community.
	Learning Environment:	Often lacks collaborative and interactive elements, leading to a passive learning experience.	Promotes an interactive and dynamic classroom atmosphere where students feel safe to express themselves.

The Importance of Innovation in Secondary Education

Secondary education is a vital era where students create the groundwork for higher learning and future employment. Secondary education is not just about academic achievement but also about preparing students with the skills and mindset needed for lifelong success. Traditional methods of instruction, based mostly on rote repetition and textbook learning, often fail to prepare pupils for real-world situations. By combining new teaching methods, educators may convert classrooms into settings where students not only learn but also develop important skills like communication, teamwork, and creative problem-solving.

Innovation in teaching is vital to make education more relevant and effective in today's environment. By integrating technology and interactive teaching methodologies, educators can create a learning environment that is more engaging and personalized to students' needs. These strategies not only increase academic performance but also help pupils build crucial life skills that will serve them well beyond their school years.

Challenges in Implementing Innovative Methods

While the benefits of novel teaching approaches are clear, their adoption in secondary school comes with hurdles. Resistance to change is a typical problem. Traditional approaches to education are strongly engrained, and both teachers and students may be resistant to adapt new teaching styles. Additionally, the incorporation of technology takes money and training, which may be a barrier for some schools, especially those in under-funded areas.

Moreover, not all creative strategies work equally effectively in every subject or for every student. For instance, while multimedia technologies and role-playing may be highly useful in courses like physics or social studies, they may need adaptations for subjects that need analytical thinking or written expression, such as mathematics or literature. Educators must carefully assess their students' requirements and develop creative ways to meet their classroom environment and curriculum.

Conclusion

The future of secondary education lies in the adoption of innovative teaching approaches. Traditional lecture-based training is no longer enough to educate students for the demands of the modern

world. Methods like multimedia tools, role-playing, flipped classrooms, and active learning are redefining secondary education, making it more interesting, practical, and relevant.

To effectively harness the benefits of these creative initiatives, schools and educators must invest in the required technology and training. Furthermore, building a school culture that promotes experimentation and embraces change would inspire both instructors and students to explore new ways of learning. By embracing innovation, secondary education can better prepare students with the information, skills, and confidence they need to thrive in both academics and life.

The varied creative teaching approaches being introduced in Indian schools, notably in Karnataka, are vital in preparing teachers for future trends in education. Through technology integration, experiential learning, inclusive instruction, collaborative learning, SEL, creativity promotion, and continual professional development, teachers are ready to address the developing needs of students and the demands of a quickly changing educational landscape.

As education continues to evolve, the job of the teacher will move from being an information transmitter to a facilitator of learning. Karnataka's concentration on innovative teaching approaches guarantees that teachers are well-prepared for this change, ultimately contributing to the formation of a future-ready, adaptive, and talented workforce capable of tackling the challenges of tomorrow's world.

Suggestions

➢ To facilitate innovative teaching approaches in Indian rural schools:

➢ Provide teacher training and workshops on emerging technologies and pedagogies.

➢ Develop context-specific educational resources and digital content.

➢ Monitor and evaluate new techniques for ongoing development.

➢ Foster collaborative learning environments.

➢ Encourage community involvement and partnerships.

By employing these techniques, schools develop a vibrant, student-centered education ecosystem, enabling teachers and students for success in an ever-evolving world.

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PREDICTING THE FUTURE OF EDUCATION

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Abstract

The education system has undergone significant development. One of the earliest formal education systems in India is the Gurukul system. Despite the ideas and knowledge that may have evolved, the fundamental structure has not changed. Earlier the students used to go to the Gurukuls. In a similar vein, students of today attend schools in order to take classes in a variety of disciplines. The focus of traditional education is on culture and customs and traditional teaching techniques place more emphasis on memorizing abilities. Whereas future trends in education focus on helping students develop and hone their skills. With rapid advancements in technology and shifts in societal needs, many are asking, "How do you think the education system will change in the future?" as we anticipate a move towards more personalized, flexible and technology driven learning environments. By staying informed about these future trends in education, educators and policymakers can better anticipate changes and adapt their strategies to ensure that they meet the evolving needs of students and prepare them for success in an increasingly dynamic world.

Introduction

The education system has undergone significant development. One of the earliest formal education systems in India is the Gurukul system. Despite the ideas and knowledge that may have evolved, the fundamental structure has not changed. Earlier the students used to go to the Gurukuls. In a similar vein, students of today attend schools in order to take classes in a variety of disciplines. The focus of traditional education is on culture and customs and traditional teaching techniques place more emphasis on memorizing abilities. Whereas future trends in education focus on helping students develop and hone their skills.

The world of education is changing rapidly and it can be difficult to keep up with all the latest trends and developments. In this we will explore thirteen key predictions for the future of education. We will examine the rise of online learning, personalized learning and other trends that are likely to shape the education landscape in the years to come.

With rapid advancements in technology and shifts in societal needs, many are asking *"How do you think the education system will change in the future?"* as we anticipate a move towards more personalized, flexible and technology driven learning environments. By staying informed about these future trends in education, educators and policymakers can better anticipate changes and adapt their strategies to ensure that they meet the evolving needs of students and prepare them for success in an increasingly dynamic world.

Predictions of the future education

Prediction 1: Online Learning will continue to Grow

Online learning has been around for years, but it really took off during the COVID-19 pandemic. Many schools and universities were forced to transition to onlinelearning and this trend is likely to continue in the future.

There are many benefits to online learning, including increased accessibility and flexibility. Students can learn at their own pace and from anywhere in the world. Online learning is also often more affordable than traditional in-person learning, making education more accessible to a wider range of students.

Prediction 2: Personalized Learning Will be the Norm

Personalized learning is a method that involves tailoring learning experiences to suit the needs and preference of individual students. This approach is becoming increasingly popular and it's predicted that it will become the norm in the future of education.

In traditional classroom settings, teachers often deliver lessons to a large group of students, with little opportunity for individual attention or customization. However, with the rise of technology and data analytics, personalized learning has become much more feasible.

The benefits of personalized learning are significant. Students can learn at their own pace and in a way that is most comfortable and effective for them. This leads to greater engagement and retention, as well as higher levels of academic achievement.

Prediction 3: Artificial Intelligence Will Revolutionize Education

AI is already changing the face of education and this trend is set to continue. AI can be used to automate administrative tasks, such as grading, which frees up teachers' time to focus on more meaningful work. It can also be used to create personalized learning experiences, by analyzing data on student performance and providing targeted feedback and recommendations.

AI is also being used to develop intelligent tutoring systems, which provide students with personalized support and guidance. These systems can help identify knowledge gaps, provide additional resources and even adjust the pace and difficulty of learning to suit individual students' needs.

Prediction 4: Virtual and Augmented Reality Will Transform Education

Virtual and augmented reality (VR/AR) technology has already been used in many industries, including entertainment, sports and healthcare. However, it is now making its way into the world of education. VR/AR technology allows students to interact with digital objects and environments in a way that was previously impossible. It can create a completely immersive learning experience that engages multiple senses, making it easier for students to remember what they've learned.

One of the most exciting applications of VR/AR technology in education is the ability to take students on virtual field trips. This allows students to visit places that would be difficult or impossible to access in real life, such as the surface of Mars or the depths of the ocean. It can also help to bridge cultural and geographical gaps, allowing students to experience different cultures and ways of life.

Another benefits of VR/AR technology is the ability to provide hands-on learning experiences without the need for expensive equipment or resources. For example, medical students can practice surgical procedures in a virtual environment, without the need for cadavers or expensive equipment. This can also be applied to other fields such as engineering, where students can build and test virtual prototypes.

Prediction 5: Learning Will Be Lifelong

In the past, education was typically something that was completed in the first two decades of life, with a few exceptions for continuing education programs. However, in the future, learning will be a lifelong pursuit.

This is partly due to the rapid pace of technological change, which means that workers will need to constantly update their skills to remain relevant in the job market. Additionally, as people live longer and retire later, they will have more time and opportunity to continue learning throughout their lives.

Prediction 6: The Role of Teachers Will Change

As technology becomes more prevalent in the classroom, the role of teachers will inevitably change. While teachers will always be essential to the learning process, their roles will shift from being the primary source of information to being facilitators of learning.

With online resources and personalized learning becoming more common, students will be able to access information and learn at their own pace. Teachers will be there to guide students, answer questions and provide feedback.

Prediction 7: Competency-Based Education Will Gain Traction

Competency based education is an approach to learning that focuses on mastering specific skills and knowledge rather than completing a certain amount of time in a class. This approach allows students to move at their own pace and focus on areas where they need more support.

In a competency based education system, students are assessed on their ability to demonstrate mastery of a particular skill or concept. Once they have demonstrated mastery, they can move on to the next skill or concept.

This approach to education is gaining traction, particularly in higher education. According to the competency based education network, there are currently more than 600 colleges and universities in the United States offering competency based programs.

Prediction 8: Education Will Become More Global

Thanks to advancements in technology and transportation, the world is becoming increasingly connected. This means that in the education in the future will become more global in nature.

Already, there re many opportunities for students to study abroad, participate in international exchange programs and engage in online learning with students from around the world. However, in the future, these opportunities will become even more widespread and accessible. Global education will be important for preparing students to work in a globalized economy, as well as for promoting cross-cultural understanding and cooperation.

Prediction 9: Holistic Development

The prediction for education is not limited to academics only but it is about the holistic development of the learner where the social-emotional, cognitive and physical development of the student is taken care of. The best schools have adopted a problem based learning approach. The main focus is to enhance the skills of conflict resolution, social-emotional development and decision-making skills along with the curriculum. Learners get various opportunities such as student-Led conferences, Project culmination and exhibitions, all in order to sharpen their skills.

Prediction 10: Depth of knowledge

Rote learning and cramming should be replaced by more hands-on activities and learning by doing to sustain the learning. The best schools have the vision to not restrict the learning only to recalling, naming and defining but also the application of the knowledge in real life scenarios.

Prediction 11: Skills enhancement

The future of education is not only bookish knowledge but also life and career skills and cornerstone skills that comprise collaboration, problem solving skills, critical thinking, conflict resolution, resilience and decision making skills.

Prediction 12: Inclusive schools

Sensitizing the learners, making them respectful, inculcating and imbibing the values at a young age is becoming the trend. Top schools have an inclusive environment. The value of empathy, acceptance, being respectful, open minded and kindness are instilled from a very young age.

Prediction 13: Project-based Learning

When students have intrinsic motives for learning, when they engage not for external reward but because they find the activity itself interesting and gratifying, they become more likely to attach meaning to their work, explore new topics and persist in the face of learning challenges. The prediction for education is that PBL will become a global trend and an important part of education.

Challenges schools will face in the future

Few would disagree n the point that our education system has ample room for improvement with planning and execution in the right direction, we may achieve what we desire and improve the system of our education.

1. Raising the professional status of teaching

The first challenge is to raise the status of teaching as career choice, to attract more brilliant people into teaching and to develop teaching as a knowledge-based profession.

2. Designing a 21st century curriculum

For decades we have not seen any significant changes in the school curriculum and this is predominantly true in the senior secondary school because of this, student's experience of school subjects is very different from the experiences of those who work in these disciplines. The curriculum is one of the most important element of a school and in the future, it has to be re-designed systematically for the students in the 21st century for their better life ahead. Today's world is very much different from that of 40 years ago. And the pace of change is accelerating, with increasing globalization, advances in technology, communication and social networking, significantly improved access to information and knowledge. The school curriculum must attempt to equip students for the dynamic future.

3. Promoting flexible learning arrangements focused on growth

To meet the requirements of individual learners flexible learning arrangements in schools is the key. Every academic year the curriculum is made and students are judged and graded on how well they perform on that curriculum. This approaches to organizing, teaching and learning will only be appropriate if students of the same age commence each academic session at more or less the same

point in their learning but this is often not the case. Appropriate age –based flexible learning programs will help organize teaching and learning in a well-established way that will help teachers to measure and grade all students in a very systematic way through proper evaluations.

4. Making education affordable

If education has to reach all the students, it should be made very affordable. The fee structure in Government, as well as private schools, must be re-structured. There should also be some extra benefits for poor and deserving students. We urged all the educators to mark that education should not become over expensive and ensure that no deserving candidate is denied admission is he/she is financially poor.

Challenges teachers will face in the future

The advent of technology, shifting student demographics and evolving learning needs have reshaped the educational landscape. We delve into the challenges faced by teachers in the 21st century and explore how they can navigate these obstacles to create effective learning environments.

1. Technological Advancements:

One of the most prominent challenges for educators today is harnessing the powe of technology for enhanced learning. While digital tools and online resources offer unprecedented opportunities, integrating them effectively into the classroom can be overwhelming. Teachers must become proficient in utilizing technology to engage and empower students, while also ensuring responsible and ethical use.

Additionally, technology driven distractions and information overload can impede student's ability to focus and retain information. Thus, striking a balance between leveraging technology and fostering critical thinking skills a key challenges for teachers,

2. Changing Students Demographics

The 21st century classroom is more diverse than ever before, with students from various cultural, linguistic and socio-economic backgrounds. This diversity presents both opportunities and challenges for educators. Teachers must adopt inclusive teaching practices to address the unique needs of each students, creating and inclusive and equitable learning environment.

Cultural sensitivity, differentiated instruction and personalized learning approaches become essential tools in engaging and empowering every student. Moreover teachers must navigate language barriers, cultural differences and varying educational backgrounds to ensure all students have equal opportunities for success.

3. Evolving Learning Needs

Traditional models of education are no longer sufficient to meet the diverse learning needs of today's students. The focus has shifted from rote memorization to fostering critical thinking, problem-solving, creativity and collaboration skills. This transition requires teachers to adapt their pedagogical approaches and move away from the one-size-fits-all mentality.

Differentiated instruction, project-based learning and incorporating real-world examples are effective ways to engage students and prepare them for the challenges of the modern workplace. However, implementing these strategies can be demanding, requiring teachers to continually update their knowledge and adapt their instructional practices accordingly.

4. Information Overload and Fake News

The digital age has democratized access to information, but it has also given rise to the challenge of information overload and the proliferation of fake news. Teachers play a critical role in equipping students with information literacy skills, enabling them to evaluate sources critically,, distinguish fact from fiction and think critically about the information they consume.

Educators must help students navigate the vast sea of information and foster critical thinking skills necessary to analyze, synthesize and evaluate the reliability of sources. Teaching students to be discerning consumers of information ensures they become active participants in society making informed decisions based on evidence.

Conclusion:

Teaching in the 21st century presents numerous challenges for educators, but it also offers unprecedented opportunities to shape the future of education. By embracing technology, promoting inclusivity, adapting to evolving learning needs, and fostering critical thinking skills, teachers can navigate these challenges effectively.

The future of education is exciting and full of potential. With the advancements in technology and changing needs of the workforce, it is important that the education system adapts to prepare students for the future. The predictions discussed in this article are just a glimpse of what's to come, and it is up to educators and policymakers to ensure that our education system evolves to meet the needs of future generation.

Embracing the future of technology in education will be key to creating innovative learning environments that not only keep pace with technological advancements but also equip students with the skills and knowledge necessary for success in a rapidly evolving world.

Continues professional development, collaboration with colleagues and open communication with students and parents are vital to addressing these challenges. As the educational landscape continues to evolve, teachers must remain adaptable, innovative and committed to nurturing the potential of every student. By doing so, they play a pivotal role in preparing the next generation for success in the dynamic world of the 21st century.

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EFFECTIVENESS OF TEACHER EDUCATION IN MENTORSHIP AND TEACHER LEADERSHIP

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Abstract

This paper describes the views of Effectiveness of Teacher education in teacher leadership and mentorship, also this paper reports the   role of teacher education to design to gain a better understanding of the mentoring experience. Mentoring is a vitally important mechanism to benefit and train the next generation of knowledge creators and disseminators. Mentoring, as one of the formal teacher leadership roles, creates a space for teachers to display their leadership potential as it indirectly brings value to the school community. The purpose of these qualitative views is to examine mentor teachers' perceptions whether they transfer their evolving mentoring skills into other leadership practices. Mentoring is a powerful way to develop teacher leadership, which is the ability to influence and improve teaching and learning beyond one's own classroom. Effective mentoring can help teachers grow professionally, collaborate with peers, and take on leader. The various reasons that teacher mentoring within schools is beneficial for schools, teachers, and students. Mentoring within schools promotes teacher retention and consistency among educators. Mentoring programs not only increase job satisfaction and help teachers to emerge as leaders within their schools, but also have a positive effect on student achievement and engagement. Mentoring allows people to learn from one another and facilitates the transmission of knowledge. Mentoring, rather than developing specific academic abilities or information, focuses on building confidence and relationships, developing resilience and character, and raising expectations.

Keywords:- Effectiveness, Teacher leadership, mentorship and teacher Education

Introduction

Teacher leaders often play the mentor and role model for first-year and early career teachers, providing much-needed support, guidance, and advice. In this role, they gain the trust of and develop empathy for others, creating safe, welcoming learning environments for other teachers and students. In teacher education, mentoring is a complex and multi-dimensional process of guiding, teaching, influencing and supporting a beginning or new teacher.. The terms mentoring, modelling, and coaching are frequently used interchangeably by educators Mentoring is the process of serving as a mentor, someone who facilitates and assists another's development. The process includes modelling because the mentor must be able to model the messages and suggestions being taught to the beginning teacher in teacher education.

Meaning of mentor

1. A **mentor** is a person who can guide, advise, and support you in your personal or professional life. They are experts who work with you to understand your problems. to help and give advice to a younger or less experienced person, especially in a job or at school.
2. Mentoring is a learning tool to support personal development. In this relationship, the Mentor helps the Mentee to 'discover their wisdom'.

Meaning of Leadership:

1. "**Leadership** is the art of motivating a group of people to act toward achieving a common goal."

2. "Leadership is the ability to influence and guide others towards a common goal or vision. A great leader is someone who inspires and motivates their team, communicates effectively, and is." accountable for their actions

Importance of mentoring and leadership in teacher education

- Mentoring is a powerful way to develop teacher leadership in teacher education
- Leadership is defined as the ability to influence and guide others.
- Builds school culture by supporting educators' professional growth and psychosocial development.
- Seek to solve problems they initiate actions, and are enthusiastic adopters of positive change, thus encouraging colleagues to join the effort teacher education
- Attitude and character professional competence and experience; communication skills; and interpersonal skills.
- Develop their leadership skills and improve their communication skills.
- Open them up to new ideas and practices for teacher education
- To facilitate the personal and professional growth of individuals by providing guidance, support, and knowledge for teacher education
- Conveys respect for the teacher's potential and emerging expertise
- Advising on workload and departmental expectations for teaching, research, student advising and service.
- Helping the mentee identify the support for attending conferences.
- Providing constructive criticism and encouragement of teacher education
- Develop mentoring and support skills while working with pre service teachers
- Prepare for career path that involves mentoring and leadership roles in professional development at the school.

Mentoring and leadership **- Objectives and Benefits**

- Support building academic leaders who have knowledge, skills and abilities
- Foster higher levels of engagement and career vision in teacher education
- Equip faculty members to enhance their capability about teacher education.
- Create opportunities to meet and partner with stakeholders, or cultural boundaries
- Create a concept mentorship as an effective way of developing proficient individuals
- Successful mentoring results in benefits to the mentee, mentor and the organization.
- Retention of high-quality employees in the institutions
- Reputation for investing in our employees' success
- Enhanced awareness of possible contextual barriers resulting in early intervention.
- Increased job satisfaction and job morale among teacher educators.
- Increased organizational productivity and outcomes.

Key components of an effective mentoring and leadership **relationship in** teacher education.

- Open Communication and Accessibility.
- Goals and Challenges.

- Passion and Inspiration.
- Caring Personal Relationship.
- Mutual Respect and Trust.
- Exchange of Knowledge.
- Independence and Collaboration.
- Role modelling and Set expectations.
- Listen and Give feedback.
- Advocate and Remove the scaffolding.
- Improving communication between individuals/groups/units.

Qualities of a Mentor and leader

- Advisor and Friend and Promoter to others in the community.
- Mentor provides constructive feedback
- Provide constructive feedback
- Perspectives and sponsorship.
- Mentor may also involve the mentee as a collaborator
- Ability and desire to work with others with unselfish.
- Caring and genuine interest in the welfare of the faculty.
- Willing to be a role model for other teachers
- Exhibits strong commitment to the teaching profession
- Believes mentoring improves instructional practice
- Willing to advocate on behalf of colleagues
- Willing to receive training to improve mentoring skills
- Demonstrates a commitment to lifelong learning
- Is reflective and able to learn from mistakes
- Is eager to share information and ideas with colleagues
- Is resilient, flexible, persistent, and open-minded
- Exhibits good humour and resourcefulness
- Enjoys new challenges and solving problems

Effective ways and approaches for teacher leadership and mentorship

- Peer mentoring
- Mentor coaching
- Network mentoring
- Reverse mentoring
- Group mentoring
- Be flexible and explore new formats for mentoring
- Create awareness about mentoring programs
- Set expectations and Transition thoughtfully.

Role of Teacher Education in teacher leadership and Mentorship.

1. Leadership training seminars and Leadership conferences

2. Executive leadership training and Online training
3. Leadership workshops ,Special Courses and Group projects or work
4. Develop your active listening skills.
5. Learn to adjust approaches as needed.
6. Offer to mentor new teachers and improve the way you organize.
7. Perform evaluations and use them for growth.
8. Set goals for your teams
9. Educational Excursions and Educational Conferences
10. Create mentor/mentee pairings based on compatibility.
11. Conduct an orientation session.
12. Conduct planned activities. and Symposium
13. At the mid-year or mid-point of the program ask the midpoint evaluation form.
14. Sports Events   and evaluate each step of the implementation.
15. Reading Biography and Autobiography
16. Conduct an overall program evaluation with the mentors and mentees.
17. Conduct a follow-up evaluation and Conduct the final evaluation and take action
18. Role play and Social Service Camps.
19. Leadership Training Programmes.
20. Empathy and Active listening.
21. Organization and Relationship-building.
22. Leadership and Observation.
23. Creativity and ability to provide constructive feedback.
24. Create an open and supportive climate for discussion.
25. Two-way communications and sharing personal experiences or difficult times

Conclusions

Mentoring remains a viable policy option in teacher education. However, for purposeful mentoring to occur, a pre requisite is the acceptance of its complexity in carrying out the mentoring function. This implies careful planning. Mentoring is meant to help attract, motivate, and develop new leaders in educational systems. When teachers work together, there are more consistencies within schools, with a resultant positive effect on school climate, student engagement, and student learning. Teachers feel confident and are more likely to remain in their chosen profession when they have the support of fellow teachers and work with them closely, collaboratively, and as valued team members.

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TEACHER-EDUCATORS AND STUDENT-TEACHERS ACADEMIC RELATIONSHIP OF AIDED AND UNAIDED TEACHER-EDUCATION INSTITUTIONS

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Abstract

This study explores the dynamic relationship between teacher-educators and student-teachers in both aided and unaided teacher education institutions, with a focus on SC/ST, General, and Minority categories. Using a descriptive survey approach, the research investigates how academic relationships differ across these institutional contexts, emphasizing the role of mentorship, feedback, and collaborative engagement in pedagogical development, both inside and outside the classroom. The Teacher-Educators and Student-Teachers Academic Relationship Scale (TSAR), with a high reliability score (Cronbach's Alpha of 0.968), was employed to gather data. Through qualitative and quantitative analyses, the study examines how these interactions influence student teachers' self-efficacy, instructional skills, and classroom preparedness. The findings highlight the critical role of supportive and reflective relationships in enhancing student teachers' confidence and competence, ultimately improving the overall quality of education. Recommendations are provided to optimize teacher-educator and student-teacher interactions, fostering environments conducive to effective teaching and learning, tailored to the needs of diverse institutional settings.

Keywords: Teacher-educators, Student-teachers, Academic relationship, Teacher education institutions.

Introduction: It is a generally accepted truth that the future lies in the hands of the next generation and that the success of the next generation is based largely on education (Fatih Koca-2016). Receiving a quality education is an important cornerstone in the lives of every individual (Arul Kumaravelu-2017). A quality learning environment is achieved when the classroom or other learning environment displays high levels of support for learning. The leading approach to improve the education system currently centers on raising standards that can be measured through standardized tests. The idea is that without a quantifiable measure of progress, institutions cannot know whether they are improving; similarly, by comparing their results with those of other institutions, it is reasoned, institutions will be motivated to make even greater strides (Fatih Koca-2016). In classroom environments, positive relationships are formed between teacher-educators and student-teachers as they work cooperatively in an encouraging atmosphere (Berk, 2006, cited in Liberante, 2012). By having a good relationship with student-teachers, teacher-educators offer them the chance to be motivated and feel engaged in the teaching and learning process. Since humans are by nature social beings, interpersonal dealings play a very important part in their personal development and wellbeing. Such dealings can be effectively used in the teacher educational institutions environment for all student-teachers, children, adolescents, or adults. Student-teachers who have developed positive relationships with their teacher-educators are happier, and more enthusiastic about being in teacher educational institutions, and achieve greater academic results. Teacher-educators being aware of these facts, are trying to find ways to enhance these student-teacher, teacher-educator relationships (McFarland, 2016; Xu, 2019) (Pinyu Dai, 2024).

Review of literature

Recent research has explored various dimensions of student-teachers' relationships and how they interact with different variables in the educational context. This literature review aims to synthesize current findings on student-teachers' relationships with respect to selected variables, providing insights into the complexities of these interactions and their impact on teacher preparation and early career experiences.

Fan Wang (2024) Teachers are no longer mere authorities in the classroom but actively engage with students, thereby fostering a positive teacher student relationship. This positive relationship will not only have a beneficial impact on students but will also elevate teachers' teaching standards. And this paper emphasizes specific suggestions on how to cultivate a positive teacher-student relationship, aiming to assist teachers in creating a positive and effective rapport with their students.

Hettinger, Katharina & et.al (2023). Longitudinal relations between teacher self-efficacy and student motivation through matching characteristics of perceived teaching practice. Recent research has examined the longitudinal relationships between teacher self-efficacy and student outcomes, focusing on classroom environment factors as mediators. A study involving 959 students and 50 teachers from Grade 9 to Grade 10 found that teacher self- efficacy for classroom management indirectly influenced student enjoyment through student- perceived class-level discipline. Additionally, teachers' self-efficacy for emotional support was positively related to social relatedness, which in turn was linked to student enjoyment. These findings highlight distinct pathways through which different aspects of teacher self- efficacy impact student motivation and emotion over time, underscoring the importance of both classroom management and emotional support in fostering positive student outcomes.

Shadrack Agyekum (2019) Defined Teacher's positive relationship helps to promote student's academic growth. Teachers who emphasize positive aspect of students rather than negative aspect helps the students to be more forthcoming with positive behavior. An overemphasized negative students' attitude rather than praise leads to bad relation between instructors and students.

Wentzel (2009) Defined teacher student relationship is the nature and quality of children's relationships with their teachers play a critical and central role in motivating and engaging students to learn. Teacher-student relationships are typically defined with respect to emotional support as perceived by the student and examined with respect to their impact on student outcomes.

Need and importance of the study

Understanding the dynamics of student-teachers' relationship with teacher-educators, student- teachers are crucial for enhancing teacher-educators preparation programs. The knowledge can help in designing more effective training experiences that better prepare future student- teachers for the complexities of classroom interactions. Student-teachers' relationship significantly impact their teaching effectiveness, which in turn affects student-teachers learning outcomes. By studying the academic relationships in different dimension including social, cultural, economic, religious, political, we can identify factors that contribute to positive educational experiences for both student-teachers and their pupils. The quality of relationships student-teachers form during their training can influence their decision to persist in the teaching profession. Research in this area can provide insights into how to support and

retain new teachers addressing the ongoing challenge of teacher attrition. With the evolution of educational technologies and pedagogical approaches it is essential to understand how student-teachers' relationships are affected by and adapt to these changes. This research can inform the development of strategies to prepare teachers for diverse and evolving educational environment.

Objectives of the study

1. To find the difference between Aided and unaided institution teacher-educators and student-teachers academic relationship.
2. To find the difference among SC/ST, General and Minority institution teacher-educators and student-teachers academic relationship.

Hypothesis

1. There is no significant difference in between aided and unaided institution teacher- educators and student-teachers academic relationship.
2. There is no significant difference in among SC/ST, General and Minority institution teacher-educators and student-teachers academic relationship.

Methodology

The cause of the prevailing examine is to analyses the teacher student relationship of teacher-educators and student-teachers in aided and unaided trainer instructional organization levels. For this motive, researcher has hired descriptive survey approach.

The researcher has built the tool **Teacher-educators and Student-teachers Academic Relationship Scale (TSAR)** wherein questionnaires were organized and standardized by. It includes 87 items. It has been reviewed by the panel experts, after carrying out a pilot study and finalized 77 items by deleting 10 items by focusing 2 dimensions; interior and exterior classroom to get proper data with sub-dimensions. In-order to calculate reliability, the Cronbach's Alpha method was used and received 0.968 as reliability score.

Universe of the study

The universe of the study has been considered from teacher-education institutions in Karnataka state.

Samples of the study

For the current study the two divisions Bangalore, Kalaburagi running the Bachelor of Education Programmed (B. Ed) in Karnataka state NCTE approved. 239 colleges of Education are appealed under the above two divisions in which 30 are aided and 209 are unaided teacher education institutions. 28 colleges deriving out of total colleges teacher-educators and student-teachers selected using lottery method in the number of 168, 560 respectively under two divisions. The simple random sampling method was adopted for survey.

Tools for data collection.

A Teacher-Educators and Student-Teachers relationship questionnaire was prepared for student-teachers which was developed and standardised by Researcher . This scale consists of seventy seven items. This study was conducted by using a researcher through field visits to the various colleges of education in two divisions of Karnataka state.

Reliability of the study

The reliability was calculated by Chroubach's Alpha reliability method. The reliability of the questionnaire was found to be 0.968 by Chroubach's Alpha reliability.

Procedure for Scoring

The questionnaire consists of Main two parts i.e. 1) The interior classroom-Teaching and learning, Classroom support, Co-curricular activities, Guidance. 2) The Exterior Classroom- Social, Cultural, Economic, Religious, Political. The five-point Likert scale was used for the nine parts. There are five options are given such as strongly agree, agree, undecided, disagree and strongly disagree and scores are 5, 4,3,2,1, respectively in the nine parts.

Data analysis and interpretation

Objective:1 To find the difference between Aided and unaided institution levels teacher-educators and student-teachers academic relationship.

Hypothesis:1 There is no significant difference in between aided and unaided institution levels teacher-educators and student-teachers academic relationship.

Table:3 Shows the mean differences, SD, t-value on aided and unaided teacher-educators and student-teachers academic relationship.

Teacher-educators and Student-teachers academic relationship.

Institutions type	N	Mean	S. D	t-value	df	0.05 level of significance
Aided	160	318.82	37.98			
Unaided	400	305.44	36.20	3.89	558	significant

The table-3 reveals that the mean score association in decision making of Aided Institutions is 318.82 and unaided Institutions is 305.44 on their opinion towards Teacher-educators and Student-teachers academic relationship, the SD value of Aided and unaided student-teachers 37.98, 36.20 are respectively. The t-value found to be 3.89, which is significant 0.05 level. Hence, the null hypothesis is rejected.
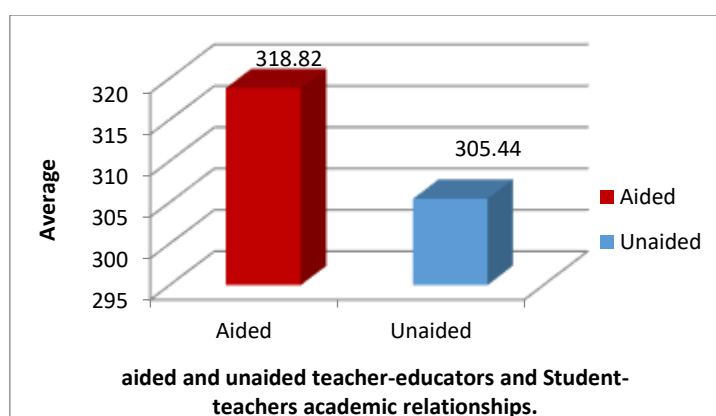
Graph:1 Graphical representation of aided and unaided teacher-educators and Student-teachers academic relationships with average.

Objective:2 To find the difference among SC/ST, General and Minority category wise institutions

teacher-educators and student-teachers academic relationship.

Hypothesis:2 There is no significant difference among SC/ST, General and Minority category wise institutions teacher-educators and student-teachers academic relationship.

Table:2 Shows the mean differences, SD, F-values on SC/ST, General and Minority category wise institutions teacher-educators and student-teachers academic relationship.

Teacher-educator and teacher-student academic relationship

Institutions Category wise	N	Mean	Groups	Sum of squares	df	Mean square	F-test
SC/ST	140	294.99	Between groups	57899.14	2	28949.57	
Minority	120	303.13	Within groups	715114.79	557	1283.86	22.54
General	300	318.37	Total	773013.93	559		

The table-2 shows that the mean score values of SC/ST, Minority, General are 294.99, 303.13, 318.37 respectively. The F-value of scores 22.54, indicates that there is significance in the opinion of the student-teachers regarding category of institution type. Hence, the null hypothesis "there will be no significant difference in opinion of student-teachers towards teacher-educators and student-teachers academic relationship regarding the category of the institutions type has been rejected at 0.05 level.
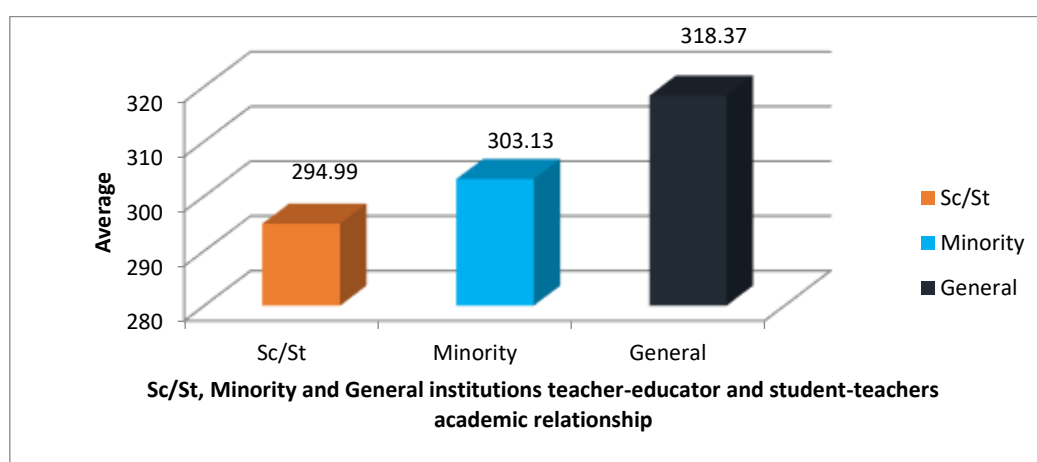
Graph: Graphical representation of Sc/St, Minority and General Institutions teacher-educators and student-teachers academic relationships with average.

Result and discussion

The analysis of the Teacher-Educators and Student-Teachers Academic Relationship revealed significant differences between aided and unaided institutions. The mean score for the academic relationship in aided institutions was 318.82, compared to 305.44 in unaided institutions. The standard

deviation values were 37.98 for aided institutions and 36.20 for unaided institutions, indicating some variability in responses within each category.

The t-value calculated was 3.89, which is statistically significant at the 0.05 level. This significant t-value suggests that there is a notable difference in the academic relationship between teacher-educators and student-teachers in aided versus unaided institutions.

Given these results, the null hypothesis, which stated that there is no significant difference between aided and unaided institutions in terms of academic relationships, is rejected. This indicates that the type of institution (aided or unaided) does indeed impact the nature of the academic relationship between teacher-educators and student-teachers.

This finding implies that the institutional context plays a crucial role in shaping these relationships, possibly due to differences in resources, support systems, and organizational structures. Further research could explore the specific factors contributing to these differences and how they affect educational outcomes and teacher-student interactions.

Conclusion

In conclusion, this study has demonstrated the academic relationship between pedagogue and trainee-teacher both in the case of affiliation and category of institutions. Through the comprehensive analysis Crosnoe et al. (2004:57, cited in Gablinske, 2014) stated that "students who had more positive views of their teacher-educators did better and had fewer problems in institutions". Within the learning environment, importance needs to be placed on the development of positive academic teacher-educators and student-teachers relationship. As per the outcome, opinion of the Intermediate student-teachers towards the teacher-educators and student-teachers academic relationship among the student-teachers regarding in both cases; institution type and category type of institution and has different opinions. In which aided institutions academic relationship is higher than unaided institutions and SC/ST category institutions have less academic relationship in comparison with General, and Minority category institutions. To more effectively develop relationship with their student-teachers, teacher-educators should strive to provide a supportive environment that built upon high expectation, positive encouragement, and a healthy dose of humor. Student-teachers will feel secure that the environment surrounded by caring teacher-educators will allow them grow and develop their capacities, and give more of themselves to the enhancing of the teaching and learning process (Fosen, 2016). Moreover, teacher-educators need to develop caring relationships with their student-teachers in order to develop an in-depth understanding their teaching and learning needs and abilities; "they also need to establish an emotional link in different dimensions both in Interior classroom; teaching and learning, classroom support, co-curricular activities, guidance and exterior classroom; social, cultural, economic, religious, political to motivate the student-teachers to participate actively in the teaching and learning process". Building genuine trustworthy relationships between teacher-educators and student-teachers is pivotal in student-teachers capacity to teach and learn. When teacher-educators believe in student-teachers ability to succeed it motivates them because student-teachers don't want to let them down but it also makes student-teachers believe that they are more capable than they even imagined (Koplow, 2002, cited in Da Luz, 2015). Further study is needs exploit what are facilities are making aided higher than that of unaided and what are the factors involved affected for the yield of more academic relationship

in general and minority.

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EFFECTIVENESS OF LIFE SKILLS EDUCATION ON PROBLEM SOLVING SKILL AMONG STUDENT - TEACHERS OF B.ED. PROGRAMME.

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Abstract

The present study is to find out the effectiveness of life skills education on Problem solving skill among student-teachers of B.Ed. programme. The study adopts "pre-test and post-test equivalent group experimental design." The sample of the study was 80 student-teachers of B.Ed. programme. The sample was randomly selected for the study and divides the sample as control and experimental group by conducting Emotional Intelligence Test. Each group consists of 40 student-teachers. The result reveals that, the pre-test Problem solving skill scores of student-teachers are similar in control and experimental group. The post-test Problem solving skill scores of student-teachers are significantly higher in experimental group as compared to control group.

Key words: *Life Skills Education, Problem Solving Skill, Student-Teachers, B.Ed. programme.*

1. Introduction

Education main aim is overall development of an individual. Every individual has certain goals in life. Always he/she tries to achieve those goals. But on that he/she has to face many demands and challenges of the society. So he/she has to acquire some skills in their life to lead a happy life and achieve something in the life. Those skills are life skills. Student-teachers are becoming a bridge between future education and students. So if we provide life skills to student-teachers while their training period, they can imbibe these skills in their future student's life and also they can lead happy life.

The aim of the life skills education is to provide students with strategies to make healthy choices and decisions that could contribute to a meaningful life. Life skills are abilities that help to promote mental wellbeing and competence in children as they face realities of life. It helps the children to take positive actions to protect themselves and promote healthy and meaningful social relationships.

WHO defined Life skills as "The abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life." Here adaptive means that a person is flexible in approach and is able to adjust in different circumstances. Positive behavior implies that a person is forward looking, even in difficult situations, can find a ray of hope and opportunities to find solutions.

Problem-solving is the process of identifying a problem, developing possible solution paths and taking the appropriate course of action. It is a skill or an ability to understand and analyse the situations, based on the magnitude of the problem and finding the right solution. It's an essential ability a person inherits through series of incidents one would come across. It will also enhance productivity by allowing our intellectual ability to have a great impact on obstacles while minimizing the risk that will be caused by the problem.

In B.ED. Programme student-teachers play a major role in shaping the future of the students in schools and setting an example within the education system. So an empowered student-teacher is more powerful

than a deeply well-versed educator. One needs an education that will put them through untouched and unseen territories by creating healthy obstacles while including, enhancing a skill to handle situations practically challenging one.

The process of problem-solving will equip and empower student- teachers to be future-ready. One needs to get an opportunity to learn problem-solving skill to face certain challenges one would experience during the teaching period. This will enable student-teachers to be prepared to take on uncertain and unpredictable futures. Problem-Solving skill will also have a ripple effect on students in school as they will have to thrive in an extremely competitive and pragmatic society. Each day one needs to witness interferences; an ability to solve the problem becomes an essential part of the life journey. The components of Problem-Solving skill like Identification of Problem, Understanding the Problem, Evaluate and Strategies will helps to deep dive into the process of Problem Solving Skill.

2. Significance of the study

Life Skills Education helps to build a society that is outfitted with a creative spark. It has ten core skills among them Problem solving skill is also one of the skills. If the education system provides life skills education to the children, it helps to children to transit efficiently from childhood to adulthood via social and emotional skills. It helps in the improvement of social competence and problem solving skills, which helps to shape their own identity. So the education system first step should be taken before introducing the life skills education in the school, should implement these life skills among student-teachers. Because they can influence these life skills among their students and also, they can be applied in their professional life. So in this study the researcher has tried to develop the life skills on Problem solving skill through the modules and activities by using the tool for student-teachers to enhance life skills on Problem solving skill.

3. Statement of the Problem

"Effectiveness of Life Skills Education on Problem Solving Skill among Student - Teachers of B.Ed. programme."

3.1 Objectives of the Study:

- ➢ To prepare and validate the life skills education programme on Problem solving skill for student-teachers of B.Ed. Programme.
- ➢ To prepare and validate the life skills assessment scale on Problem solving skill for student-teachers of B.Ed. Programme.
- ➢ To study the effect of life skills education programme on Problem solving skill among student-teachers of B.Ed. Programme.

3.2 Hypotheses:

H_1: No significant difference between the mean scores of pre-test and post-test Problem solving skill in control group

H_2: No significant difference between the mean scores of pre-test and post-test Problem solving skill in experimental group

H_3: No significant difference between control group and experimental group mean scores of pre-test and post-test Problem Solving skill

3.3 Variables of the study
- ➢ Independent Variable: Life skills education
- ➢ Dependent Variable: Problem Solving Skill

4. Research Design

The research design adopted for the study was "Pre-test and post- test equivalent group experimental design". In this design pre-test applied to both experimental and control group, intervention programme was given only for the experimental group and control group was kept neutral. After the intervention, post –test was applied to both the groups and compared.

➢ **Sample**

The researcher employed random sampling technique. The present study consists of 80 student-teachers of B.Ed. programme. The control group and experimental group consists of 40 student-teachers each while were divided based on their Emotional Intelligent Scale scores and equated.

➢ **Tool and Modules**

  The following tool and modules were prepared by the researcher to collect the data.

a. Problem solving skill scale   **b.** Problem solving skill modules

a. Problem solving skill Scale: In the present study, to assess the problem solving skill, researcher has prepared five point Likert type rating scale. It includes the components of problem solving skill which were already selected by the researcher. Those are Identification of Problem, Understanding the Problem, Evaluate and Strategies. This scale has 30 statements and scoring is an ordinal scale from 1 to 5. (Strongly Agree-5, Agree-4, Undecided-3, Disagree-2, StronglyDisagree-1).

b. Problem solving skill Module: For the development of life skills programme on problem solving skill, the researcher referred the modules provided by WHO, NIMNHAS and UNISEF related to life skills education to understand and conceptualize the group activities and adopted certain methods and techniques. The researcher prepared 8 modules including different activities with different title related to the selected components of problem solving skill as said above.

➢ **Data Collection**

  The researcher administered the problem solving skill scale for control and experimental groups as pre-test and post-test. The researcher conducted the treatment for experimental group by using modules. Treatment consists of eight sessions of 60 mins each. In each session a prepared modules of problem solving skill were taught by applying different techniques and activities. The control group was kept neutral. After the pre-test later the post-test was administered to both the groups.

➢ **Statistics**
- • Mean
- • S D
- • t-test

5. Data Analysis

H₁: No significant difference between the mean scores of pre-test and post-test problem solving skill in control group

        To test the above H₁, the dependent / paired t-test was carried out and outcome of the test are presented in the table given below

Table 1: Means, SD and t-value of mean scores of pre-test and post-test problem solving skill in control group

Test	Mean	Std.Dv.	Diff. mean	Diff. SD	Paired |t|	Degrees of freedom	P-value
Pretest	89.93	8.00					
Posttest	89.58	8.26	0.35	2.11	1.0507	39	0.2999, NS

From the results of the analysis presented in the above table, it clearly shows that, the mean and SD of pre-test problem solving skill scores is 89.93±8.00 and mean and SD of post-test problem solving skill scores is 89.58±8.26 in control group. The mean of difference of pre-test to post-test problem solving skill scores is 0.35±2.11 in control group. This difference is found to statistically not significant (t=1.0507, p=0.2999) at 5% significance level. It means that, the pre-test and post-test problem solving skill scores are similar in control group.
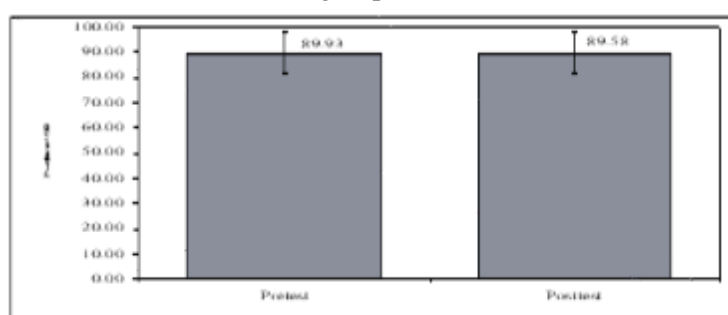
Fig. 1 Comparison between the mean scores of pre-test and post-test problem solving skills in control group

H$_2$: No significant difference between the mean scores of pre-test and post-test problem solving skill in experimental group

To test the above H$_2$, the dependent / paired t-test was carried out and outcome of the test are presented in the table given below.

Table 2: Means, SD and t-value of mean scores of pre-test and post-test problem solving skill in experimental group

Test	Mean	Std.Dv.	Diff. mean	Diff. SD	Paired |t|	Degrees of freedom	P-value
Pretest	88.25	5.49					
Posttest	123.55	5.79	35.30	7.39	30.2069	39	0.0001,S

From the results of the analysis presented in the above table, it clearly shows that, the mean and SD of pre-test problem solving skill scores is 88.25±5.49 and mean and SD of post-test problem solving skill scores is 123.55±5.79 in experiment group. The mean of difference of pre-test to post-test problem solving skill scores is 35.30±7.39 in experiment group. This difference is found to statistically not significant (t=30.2069, p=0.0001) at 5% significance level. It means that, the pre-test and post-test problem solving skill scores are different in experimental group.
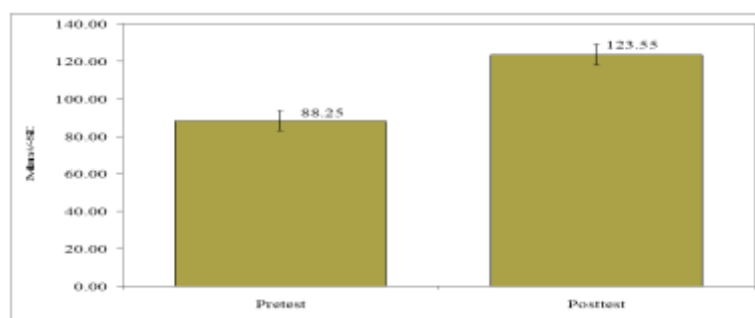
Fig 2. Comparison between the mean scores of pre-test and post-test problem solving skills in experiment group

H₃: No significant difference between control group and experimental group mean scores of pre-test and post-test problem solving skill

To test the above H_3, the two sample independent t-test was carried out and outcome of the test are presented in the table given below.

Table 03. Means, SD and t-values between control group and experimental group with mean score of pre-test and post-test problem solving skill

Problem solving skills	Control group			Experiment group			|t|-value	p-value
	n	Mean	SD	n	Mean	SD		
Pretest	40	89.93	8.00	40	88.25	5.49	1.0923	0.2781, NS
Posttest	40	89.58	8.26	40	123.55	5.79	21.3090	0.0001,S
Difference	40	0.35	2.11	40	35.30	7.39	29.3378	0.0001,S

From the results of the above table, the mean and SD of changes from pre-test to post-test scores of problem solving skill in control group is 89.58±8.26 and in experiment group is 123.55±5.79. The difference is found to be statistically significant with t-value i.e. 21.3090 and p-value i.e. 0.0001 at 5% significance level. So, H_3 is rejected. It means that, the mean score of changes from pre-test to post-test problem solving   skill different in control group and experimental group. A further statement is that, the mean score of changes from pre-test to post-test problem solving skill significantly higher in experimental group as compared to control group.
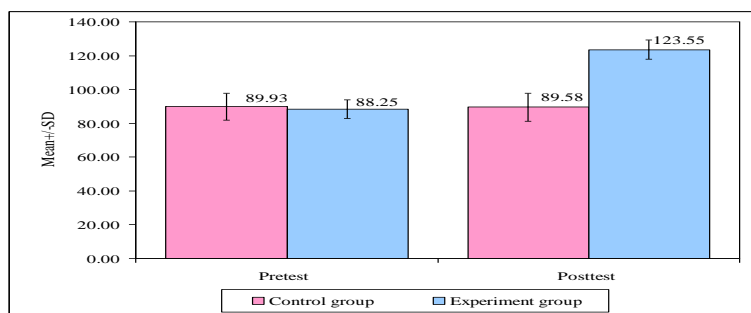
Fig. 3 Comparison between control group and experiment group with

mean score of pre-test and post-test problem solving skills

> **Findings of the Study**

- The programme was found effective for Student-Teachers who underwent the Treatment: Life Skills Programme on problem solving skill
- There is no significant difference between the mean scores of pre-test and post-test problem solving skill in control group.
- There is a significant difference between the mean scores of pre-test and post-test problem solving skill in experimental group.
- The mean score of changes from pre-test to post-test problem solving skill is significantly higher in experimental group as compared to control group. In another word, the change in problem solving skill scores experimental group is higher as compared to control group.

> **Conclusion**

The present study was undertaken to develop life skills education programme on problem solving skill. To check the effectiveness of life skills education programme on problem solving skill among student-teachers of B.Ed. programme. The post intervention scenario on the life skills education on problem solving skill of student-teachers reveals that, there was a lot of improvement in their life skills related to problem solving skill. The research study emphasises that, to enhance life skills among student-teachers through, life skills education programme is very necessary in B.Ed. programme. Then only it is possible to bring better future education through skills based education in our society.

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TEACHER EMPOWERMENT AMONG GOVERNMENT UPGRADED SCHOOL TEACHERS IN SHIVAMOGGA DISTRICT

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Abstract

Empowerment in this context refers to providing teachers with the autonomy, resources, and professional development opportunities necessary to take charge of their classrooms, participate in decision-making, and adapt to new challenges. The present study attempts to study the Teacher Empowerment among Government Upgraded School teachers in shivamogga district The objectives of the study To measure and analyses the levels of Teacher Empowerment among government Upgraded School teachers and study the mean significant difference in various components related to Teacher empowerment among government Upgraded school teachers with respect to educational Qualification. The study was a descriptive survey in order to know Impact of variables. It is correlational and casual-comparative in nature and comprised 405 teachers out of the total pool of 756 teachers. This study clearly showed that the majority of the teachers fall under average level of Teacher Empowerment of government Upgraded School. Teachers have a Significant Relationship This study is inferred that "there is a Mean significant differences between in Teacher empowerment among government upgraded school teacher with respect to their Educational qualification".The significant difference in Teacher Empowerment scores based on Educational qualifications ('F'=18.222, p<0.05) the significant mean differences in Teacher empowerment components based on educational qualifications highlight the necessity for focused interventions that promote equity, enhance professional development, and ultimately improve educational outcomes fostering a supportive and empowering environment for teachers, which is essential for enhancing their professional development upgraded schools.

Key words;- Educational Qualification, Teacher empowerment, Government upgraded school

Introduction;-

Teacher empowerment is a crucial factor in enhancing the quality of education and improving school environments. In government-upgraded schools, which often transition from primary to higher levels of education, the need for teacher empowerment becomes even more significant. Empowerment, in this context, refers to providing teachers with the autonomy, resources, and professional development opportunities necessary to take charge of their classrooms, participate in decision-making, and adapt to new challenges.

One of the key elements affecting teacher empowerment is their educational qualification. Highly qualified teachers tend to have more confidence, pedagogical knowledge, and capacity to innovate in their teaching methods. As the educational landscape evolves, particularly in government-upgraded schools, it becomes essential to examine how teachers' educational qualifications influence their sense of empowerment, which in turn affects the overall school performance and student outcomes.

It will investigate how teachers' qualifications impact their professional growth, leadership roles, decision-making abilities, and the ability to adapt to changing educational demands. Additionally, the study will address the challenges teachers face in government-upgraded schools and how their qualifications can help mitigate these challenges. By understanding this relationship, educational policymakers can better support teacher development and create more effective school environments.

Review related literature;-

Yelti Pranathi's (2022) study focuses on the empowerment of teachers and their academic professional development. Over the past decade, teacher empowerment has gained importance, emphasizing decentralization of educational management to give teachers more control as they directly engage with students. The six pillars of empowerment, as defined by Short and Greer, include decision-making, teacher influence, status, autonomy, self-efficacy, and opportunities for professional growth. Professional development involves continual learning and skill enhancement, enabling teachers to meet current and future demands in their careers. Effective implementation of teacher empowerment requires collaboration between management and teachers to address issues, innovate, and shape the school's vision.

Aqila Rafique and Mahr Muhammad Saeed Akhtar's (2020) study examined teacher empowerment in relation to demographic factors like gender, qualification, experience, rank, and employment type among university instructors in Punjab, Pakistan. Using the "School Participants Empowerment Scale" (SPES) by Short and Rinehart (1992), the study surveyed 415 instructors from seven universities. The scale measures six empowerment categories: decision-making, professional development, status, self-efficacy, autonomy, and influence. Findings revealed that instructors were perceived to have significant influence. However, demographic factors, except qualification, showed a mean difference in teacher empowerment. The study used descriptive and inferential statistics, including mean, t-test, correlation, and ANOVA, to analyze the data.

Significance of the study;-

The study on teacher empowerment in government-upgraded schools concerning their educational qualifications is significant as it sort out on how varying qualification levels influence teachers' sense of autonomy, decision-making, and professional growth. Understanding this relationship is crucial for developing targeted professional development programs and policies that enhance teaching effectiveness and job satisfaction. By identifying specific empowerment needs based on qualifications, the study can help improve teacher performance, student outcomes, and overall school success. Additionally, it provides insights into optimizing resource allocation and ensuring equitable opportunities for teacher growth, ultimately contributing to a more empowered and effective educational workforce.

Objectives of the Study:-

The objectives of the study are as follows: -

> 1. To measure and analyse the levels of Teacher Empowerment among government Upgraded School teachers with respect to Educational qualification
>
> 2. To study the mean significant difference in various components related to Teacher empowerment among government Upgraded school teachers with respect to educational Qualification.

Hypothesis of the Study:-

> 1. There is no significant difference in Teacher empowerment and their components among upgraded school teachers with respect to their educational qualification.

Methodology of the study:-

The study will be designed of a descriptive survey in order to know The Teacher Empowerment of Government Upgraded School Relation to Their Educational Qualification

Variables of the Study:-

➢ Teacher Empowerment
➢ Government upgraded school
➢ Educational Qualification (D.ED/TCH, UG with B. ED, PG with B. ED)

Population and Sample:-

The population for the present study comprised Researcher selected Randomly 405 teachers out of the total pool of 756 teachers. This random selection helps ensure that sample is not biased and is a representative subset of teachers from the government upgraded schools in the shivamoga district Out of the 121 upgraded schools, researcher selected 77 schools for the present research

Tools used for the Study:-

● Teacher Empowerment Scale (2019)- Dr. Manju N. D and Dr. G. Sheela The scale consists of 63 items from six dimensions. (Decision Making, Professional Growth, Teacher Status, Teachers Self-Efficacy, Teachers Autonomy, Teacher Impact). 98 Cronbach's alpha reliability was found to be 0.951.

Data analysis Techniques used for the study:-

Statistical Techniques such as Quartile Deviation Percentage Analysis, mean, standard deviation was used. To find out the difference between of variables ANOVA was carried out.

Analysis of the data;-

Objective-1: To measure and analyse the levels of Teacher Empowerment among government Upgraded School teachers with respect to Educational Qualification.

To achieve this Objective, Quartile Deviation and Percentage Analysis was applied and the results are presented in the following

Table-1: Table shows Range, N, Percentage, Mean and Standard Deviation scores of government Upgraded school Teacher based on their Teacher empowerment Levels.

Teacher Empowerment	Range	N	%	Mean	Std . Deviation
High	Above 230	98	24.19%	246.2245	9.56640
Moderate	200-229	211	52.09%	212.4597	8.80649
Low	Below199	96	23.70%	178.1875	25.92674
Total		**405**	**100%**	**212.5062**	**27.85692**

The Above Table 41 shows, the teacher's empowerment levels of the teachers where it had found that, 24.19. %, 52.09% and 23.70.1% of the teachers having High, Moderate and Low empowerment respectively. It can be concluded that nearly 53% of the teachers belong to moderate teacher's empowerment level.

The teachers with low teacher's empowerment (N = 96) have mean score 178.18 and standard deviation 25.92. The teachers with moderate teacher's empowerment (N = 211) have mean score 212.45. and

standard deviation 08.80. The teachers with high teacher's empowerment (N = 98) have mean and standard deviation 246.22and 09.56 respectively. The teachers with overall empowerment (N = 405) have mean and standard deviation 212.50 and 27.85 respectively.

The mean scores allow for a comparison of empowerment levels. Teachers with high empowerment have the highest mean score, followed by those with moderate empowerment and low empowerment. The data suggests that teachers with high empowerment levels tend to have higher mean scores compared to the other groups.
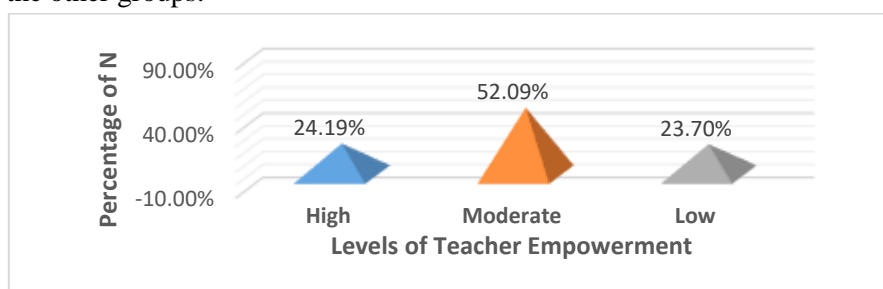
Graph 1: Graph shows Comparison between levels of Teacher Empowerment.

Comparison between high, medium and low levels of Teacher Empowerment. 52.09% of upgraded school Teachers with moderate Teacher Empowerment , 24.19% of upgraded school Teachers with high Teacher Empowerment and 23.70% of upgraded school Teachers with low Teacher Empowerment. Most of the upgraded school Teachers are under a moderate level of Teacher Empowerment.

Objective-2: To study the mean significant difference in various components related to Teacher Empowerment among government Upgraded school teachers with respect to educational Qualification. To full fill the above objective researcher formulated the following null hypothesis-2

Hypothesis-1: There is no significant difference in Teacher Empowerment and their components among upgraded school teachers with respect to their educational qualification. To fulfill the Hypothesis-1 researcher formulated following Sub-hypothesis 1.1 to 1.8

Table No 2. Shows that the obtained mean scores of Teacher Empowerment and there components among upgraded school teachers with respect to their qualification.

SI	VARIABLE AND COMPONENTS		N	Mean	Std. Deviation
I	**Teacher Decision Making**	DED/TCH	126	34.7857	6.95081
		UG+BED.	193	37.4249	5.54769
		PG+BED.	86	37.7209	5.12813
		TOTAL	405	36.6667	6.05993
II	**Teacher Impact**	DED/TCH	126	40.0952	7.30417
		UG+BED.	193	42.9845	5.25642
		PG+BED.	86	44.7558	5.93283
		TOTAL	405	42.4617	6.32781
III	**Teacher Status**	DED/TCH	126	33.2302	6.34875
		UG+BED.	193	36.5337	5.00626
		PG+BED.	86	36.6395	5.48348

		TOTAL	405	35.5284	5.75337
IV	**Teacher Autonomy**	DED/TCH	126	42.1111	7.98921
		UG+BED.	193	45.0104	5.76718
		PG+BED.	86	45.9302	5.53022
		TOTAL	405	44.3037	6.65516
V	**Teacher Professional Growth**	DED/TCH	126	44.8254	8.34849
		UG+BED.	193	47.9275	5.67294
		PG+BED.	86	49.5116	6.00342
		TOTAL	405	47.2988	6.89792
VI	**Teacher Self Efficacy**	DED/TCH	126	40.6825	7.19294
		UG+BED.	193	43.6684	5.25732
		PG+BED.	86	44.5814	6.15957
		TOTAL	405	42.9333	6.28829
	Teacher Empowerment	DED/TCH	126	200.9444	34.00525
		UG+BED.	193	216.1244	21.62476
		PG+BED.	86	221.3256	24.99856
		TOTAL	405	212.5062	27.85692

Table No 3. Shows that the obtained 'F' value of Teacher Empowerment and there components among upgraded school teachers with respect to their qualification.

SI	VARIABLE AND COMPONENTS		Sum of Squares	df	Mean Square	F	Sig.
I	**Teacher Decision Making**	Between Groups	652.323	2	326.161	9.244	significant
		Within Groups	14183.677	402	35.283		
		Total	14836.000	404			
II	**Teacher Impact**	Between Groups	1210.974	2	605.487	16.264	significant
		Within Groups	14965.683	402	37.228		
		Total	16176.657	404			
III	**Teacher Status**	Between Groups	966.741	2	483.371	15.663	significant
		Within Groups	12406.182	402	30.861		
		Total	13372.923	404			
IV	**Teacher Autonomy**	Between Groups	929.639	2	464.820	11.015	significant
		Within Groups	16964.005	402	42.199		
		Total	17893.644	404			
V	**Teacher Self Efficacy**	Between Groups	1268.218	2	634.109	14.198	significant
		Within Groups	17954.632	402	44.663		
		Total	19222.849	404			

VI	Teacher Professional Growth	Between Groups	976.191	2	488.095	13.082	significant
		Within Groups	14999.009	402	37.311		
		Total	15975.200	404			
	Teacher Empowerment	Between Groups	26058.724	2	13029.362	18.222	significant
		Within Groups	287448.510	402	715.046		
		Total	313507.235	404			

Findings of the study;-

➢ The teachers were categorized into different levels of empowerment: High, Moderate, and Low. The percentages of upgraded school teachers in each category were as follows High Empowerment:24.19%, Moderate Empowerment: 52.09%, Low Empowerment: 23.70%

➢ There is PG+BEd. teachers consistently report the highest mean scores across components, followed by UG+BEd., while DED/TCH teachers score the lowest. For instance, teacher empowerment scores are 221.32 for PG+BEd., 216.12 for UG+BEd., and 200.94 for DED/TCH. Teacher decision-making scores are 37.72, 37.42, and 34.78, respectively, and teacher impact scores are 44.75, 42.98, and 40.09. Similarly, for teacher status, the scores are 36.63, 36.53, and 33.23, and for teacher autonomy, they are 45.93, 45.01, and 42.11. Professional growth scores are 49.51, 47.92, and 44.82, while self-efficacy scores are 44.58, 43.66, and 40.68.

➢ There is a significant mean difference in the Teacher Empowerment('F'=18.22 $p < 0.05$), scores among teachers in upgraded schools based on their qualifications.

➢ There are significant mean differences in the Teacher Empowerment components, including Teacher decision making ('F'=9.24), Teacher impact('F'=16.26), Teacher status ('F'=15.66.), Teacher Autonomy('F'=11.01.), Teacher professional growth('F'=13.08.) and Teacher self-efficacy ('F'=14.19.) scores among upgraded school teachers based on their qualifications.

Educational implications;-

Targeted Professional Development with over half of the teachers (52.09%) experiencing moderate empowerment, there is a need for targeted professional development programs aimed at increasing their empowerment levels. Training that focuses on enhancing decision-making, self-efficacy, and autonomy can foster a more empowered teaching workforce.

Retention Strategies are the significant proportion of teachers in the low empowerment category (23.70%) highlights the necessity for intervention strategies to improve their engagement and job satisfaction. Addressing their concerns can help retain qualified educators, reducing turnover rates.

Collaborative Environment the empowerment levels suggest the need for creating a collaborative environment where teachers can share best practices and support each other in professional growth.

This could enhance the overall teaching quality and student outcomes and Policies that encourage decentralized decision-making and provide teachers with a greater voice in the educational process can lead to improved school performance.

Targeted Professional Development Invest in professional development programs for DED/TCH teachers to enhance their skills in decision-making, self-efficacy, and autonomy. This could improve their overall sense of empowerment and professional growth.

Mentorship Programs Establish mentorship opportunities where more qualified teachers (PG+BEd. and UG+BEd.) guide DED/TCH teachers, sharing effective practices and building confidence in key areas like classroom autonomy and decision-making.

Increased Access to Further Education Encourage DED/TCH teachers to pursue higher qualifications (e.g., UG+BEd., PG+BEd.) by offering incentives such as scholarships or flexible learning programs, which could bridge the gap in empowerment and self-efficacy.

Empowerment Strategies Implement school-based initiatives that provide all teachers with opportunities for greater autonomy, professional growth, and decision-making roles, particularly for those in the DED/TCH group, to elevate their sense of status and impact.

The significant mean difference in teacher empowerment scores among government upgraded school teachers, indicated by an F-value of 18.22 ($p < 0.05$), has several importance

The findings suggest that teachers with varying educational qualifications experience different levels of empowerment. This calls for differentiated professional development programs tailored to specific qualification levels, enabling all teachers to attain higher empowerment.

Policymakers should consider revising policies that influence teacher empowerment based on educational qualifications. Ensuring that teachers with lower qualifications receive additional support and resources can help bridge empowerment gaps.

Schools should establish support systems for teachers with lower qualifications, helping them develop their skills and confidence. Mentorship programs and peer support can aid in increasing their empowerment and professional growth.

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HIGHER EDUCATION IN GLOBALIZED SCENARIO-- CHALLENGES AND OPPORTUNITIES

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Abstract

The paper highlights the impact of Globalization on Higher Education and also deals with opportunities and challenges of Higher Education in the Globalized Era. Education System of any Nation is greatly influenced by Political, Social, Economic and Cultural aspects of the Society. Tremendous changes are brought in all these aspects is due to effect of Liberalization, Privatization and Globalization. In the 21st Century, Educational institutions operate in a globalized environment. The present environment demands Students to learn modern educational skills, so as to enable students to acquire modern technological- educational skills a shift from teacher centered instruction to Learner centered instruction is required. The process of Globalization in India is influenced by all Walks of life including Education.

Keywords:- Higher Education , Globalization. Liberalization and privatization

Introduction:-
Education in a Globalized Context ;-

When India attained freedom, the then existing educational system was accepted as such because it was thought that an abrupt departure from the same would be disturbing and destabilizing. Thus, a predisposition to retain the same acquired preponderance and all that was envisaged by way of changes was its rearrangement Consequently, education including teacher education largely remained isolated from the needs and aspirations of the people, During the last five decades certain efforts have been made to indigenize the system. The gaps however are still wide and visible when our country, itself is following the global phenomenon.

As a part of globalization, the economic reform packages were introduced in India in 1991. These reform packages imposed a heavy compression on the public budget on education sector. This has trickled down to public expenditure on education. At the same time, globalization has a multi-dimensional positive impact on the system of education. It promotes new tools and techniques in this area like e-learning, flexible learning, distance education programme and overseas training. Globalization will mean many different things for education. In the near future it will mean a more competitive and deregulated educational system modeled after free market but with more pressure on it to assure that the next generation of workers is prepared for some amorphous job market of 21st century.

Knowledge is the driving force in the rapidly changing globalised economy and society. Quantity and quality of specialized human resources determine their competence in the global market. Emergence of knowledge as driving factor results in both challenges and opportunities. It is well known that the growth of the global economy has increased opportunities for those countries with good levels of education.

Since lifelong jobs have been converted into yearly contracts, there is still possibility of even short duration jobs in today's market. Hence, our education system should deliver such education and training so that professionals can adjust themselves as per market expectations. It has underlined the need for reforms in the educational system with particular reference to the wider utilization of information technology, giving productivity dimension to education and emphasis on its research and development activities. For this a strategic educational planning is essential and above all a teacher education programme that could prepare such dynamic professionals who can adjust themselves and their pedagogical practices according to the ever changing needs of the society.

Present Scenario in Higher Education:-

It is a well-known and established fact that higher education enhances the quality, efficiency, and productivity of manpower, helps in reducing income inequalities and poverty alleviation and thus promotes economic development at a faster rate. In spite of large quantitative rise in the number of institutions and enrollment, the quality has not improved much. India stands between 100 to 135th in the world ranking of Human Development Index (HDI), while advanced nations like Japan, U.S. Germany have assigned 'Most favoured status to higher education. In spite of the low quality of human capital the Indian Government is slowly withdrawing her financial responsibilities from higher education. By 2025, when LPG and WTO becomes fully operational it would be quite difficult for India to face global competition, without developing a sound intellectual base.

The quality of Indian higher education even in the post liberalization period has not been very inspiring and impressive. Among many others, major weakness and problems in higher education are low access and poor quality.

Low Equity and Access :-

Despite impressive quantitative growth in enrollment, it is disheartening to note that only 25-30% of families today are the first learners in higher education and only 10% of the Indian population in the age group of 18-23 is in higher education as compared to 51% in OECD countries and 25% in middle-income group countries.

Poor Quality :-

By and large higher education is neither relevant nor effective to face the challenges of globalization, as most of the courses in general higher education stream, are outdated, dubious, and have no relevance to the needs of the society or individual. They lack flexibility and adaptability to the changing environment.

Some Issues in Higher Education :-
- ❖ Degree biased and Exam oriented approach.
- ❖ Poor inter-sectoral allocation of funds by the Government on higher education as compared to primary and secondary.
- ❖ Uncontrolled and unplanned expansion of General higher education stream.
- ❖ Highly subsidized and open door admission policy.
- ❖ Poor infrastructure facilities.
- ❖ Neglect of global technical advancement and lethargic attitude/Unpreparedness to face competition by revamping and contents. the course structure

❖ Lack of co-ordination between Universities and Government and poor Industry-institute partnership.

❖ Omni-presence of the Government in administration, academic life of Universities as it is a major funding agency.

❖ Lack of integral urge to accept change and dynamic mechanism, on the part of Universities,

Challenges Ahead :-

An overview of the present scenario of higher education clearly depicts the dismal performance leading to serious problems related to quality and excellence. As such, the probable changes and challenges for Indian economy are expected in the following ways:

1) Overcrowding of higher education leading to further quality deterioration.

2) Critical problem of high mass educated unemployment due to too little demand in the labour market. At the same time there will be deliberate efforts to 'down size' the labour component through voluntary retirement schemes (VRS) or a ban on new recruitments employment on contract basis. or

3) Lack of demand for educated Indians abroad, except for highly skilled personnel.

4) Entry of China, the 7th largest exporter in the world, into WTO.

5) Importation of foreign Technical Personnel due to wide presence of MNC's and adoption of capital intensive technology.

6) Significant impact of Technology on culture, life- style, commerce, education and entertainment

7) Widening disparities in society such as social tension, frustration among youth leading to social cheos and anti-social elements

Possible Solutions to Overcome Challenges :-

The overall study of the problems and challenges, leads to conclude that there is an urgent need to change the total make up of present higher education system, inculcating total quality management (TQM) approach in academic, financial and administrative and Trade aspects of higher education. The following corrective measures would help to face the challenges.

1) Course Curriculum aspect: There is an urgent need for complete revamping of general higher education courses by restructuring the course curriculum with high quality to meet global market demand. This calls for short term, career-oriented, inter-disciplinary and clubbed education system, which provide 'extra' skill and competency to the learner, The system needs to be open, flexible and futuristic with emphasis on insight and knowledge than there collection of information.

2) Financial aspect: Finance is the most crying need of higher educational institutions. As long as these institutions are not financially strong, they have to depend on the Government and other legal bodies. There are three ways of making higher education self supporting.

a) Rise in Fees: The share of the Govt. in financing higher education has increased from 49% in 50-51 to 90% in 96-97. The higher education system even today is highly subsidised. It is interesting to note that the quantum of subsidies are enjoyed more by upper income groups both in general and professional higher education.

The fee structure is irrelevant. It remains stagnant for decades together. There is hardly any relation between the fee structure and the total expenditure on the course. In order to overcome inconsistencies

in both subsidies and irrelevant fees, it is necessary to adopt a realistic fees structure and adopt discriminatory pricing of higher education, where students who are able to pay, pay full fee while those who can't get liberal soft loans for higher education. This will have three effects: 1) Only those who are interested will join higher education and 2) There will be cost consciousness in higher education resulting in better quality and 3) Adequate resources will be generated through fees.

b) Autonomy: The colleges and Universities should try to develop built-in-flexibility in financial matters. Autonomy is the best solution that provides both academic and financial freedom. For those institutions. who do not go in for autonomy, the Govt. should assess the qualitative performance periodically and decide the quantum of grants. Both the measures will accelerate quality and reduce the resource crunch for best institutions in higher education.

c) New Sources: Institutions have to find out new channels of resources mobilisation than depending on state patronage, through alumna, corpus fund, Tax- exemption for fund contribution etc. At the same time the available resources (Men and material) should be used optimally.

3) Teaching, Research and Accreditation: The Teaching community, in the present scenario, has to realize that their survival depends on their competence in teaching, up-graduation of the skills, research publications and continuous students evaluation or appraisal. The teacher who was the boss earlier, is now a facilitator. As it is rightly pointed out

"The teacher is no longer the sage on the stage but the guide on the side." The teaching fraternity need to undergo attitudinal changes to be more service minded as well as highly professional. Research and innovative activities are grossly neglected and this would have serious implications on the quality of higher education. They are the pathways of transformation and as such, they must get top priorities in the Government's budget. More funds can be also generated through tie-up funding and industry-institute linkages. The institutions of higher education should be accredited periodically for quality through exclusive national level bodies like NAAC, AICTE, MCI etc.

4) Stress on specialized areas: It is very necessary to develop 'India Branding' of our special areas of higher education, when higher education becomes a globally tradable service. India has specialized opportunities in marketing education in arts and culture, Yoga, Philosophy, Dance, Music, Hotel and hospitality management, traditional medicinal, education like Ayurveda etc. These areas are to be opened internationally in a big way by up gradation and virtual enhancement of academic and physical infrastructure. The facilities for foreign students should include- availability of course schedule on Internet, telephone registration system, option to pay fees by credit-cards, well equipped dormitories, classrooms, sports facilities of international standard. The Government rules, and regulations are need to be "Export friendly" and there is a need for clear policy on higher education as a tradable service.

5) Accessing global talents: In order get best quality higher education through collaboration, the institutions are to go for inter-University-institution exchange programmes, Twinning programmes etc. The development of I.T. revolution made academic mobility internationally, creating the 'Global Village'. At the same time there is a need to make global exposure of best institutions of higher education for foreigners (Best IIT'S, Software Co's and Management institutions can do this at present.) It is necessary to identify 100-200 strong capable institutions which are internationally competitive and expose them to the world with all necessary infrastructure. This will help in attracking foreign students.

Other institutions must polish up and improve their quality of courses to face the global competition more confidently. Efforts also should be made to tap global market to export our educational talents (Indian Technocrats at Silicon Valley in the U.S. is a classical example).

6) Strong will power and hard work: The real strength of India lies in her people. They are the people who can accept any challenges and achieve Success too. Fine tuning and polishing of this human capital is necessary to nourish the best people. Late Mr. Dhirubhai Ambani (Reliance) and Mr. Narayana Murthy (Infosys) are prime examples to show that common most man can rise to the top of the heap. Late Mr. Ambani has rightly said ".....Think big, think fast, think ahead, idea is not some one's monopoly." What we need is therefore a strong will power and hard and serious efforts in every field, including all those engaged in higher education.

7) Social Responsibilities: Last but not the least, higher education system should not forget social responsibilities in the context of liberalization trends. It calls for the protection mechanism for ensuring equity, access and national interests.

Conclusion:-

Thus, the all too clear fact is that, we are weak in trading our higher education abroad. We should resist the temptation to blame globalization for our failures as many times the fault lies in ourselves. We need not throw out the baby with the bath water. We will not isolate ourselves from the world economy and look back to protected economy model. The LPG and WTO have made the Indian economy open and technology driven. Risks of an open economy are well known. Nevertheless, we must not miss the opportunities that the global system has offered. Now is the time to strike the iron while it is still hot. The new millennium and the 21st century is being looked forward to, with great expectations arid hopes in terms of better quality of life, culture and education arid must shrug off the complacent and smug attitude which she has been nursing for so long. The environment has been created in terms of standardization, norms accreditation etc. Let us not miss the bus in making higher education in India as enviable a possibility as anywhere else. India. more than many other countries is in a position to wrest large gains from the wave of globalization and liberalization.

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TEACHER EDUCATION INSTITUTIONS AND NATIONAL EDUCATION POLICY 2020

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Abstract

The National Education Policy (NEP) 2020 represents a transformative approach to the Indian education system, with significant implications for Teacher Education Institutions (TEIs). This article examines the role of TEIs in the context of NEP 2020, highlighting the policy's emphasis on enhancing the quality of teacher education through reforms such as the introduction of Integrated Teacher Education Programs (ITEPs), the phasing out of substandard institutions, and the promotion of diverse learning modalities. NEP 2020 mandates a shift towards multidisciplinary and holistic education, integration of digital tools, and continuous professional development to produce highly competent and adaptive educators. The article explores the challenges and opportunities presented by these reforms and discusses the potential impact on the future of teacher education in India. By aligning TEIs with the NEP's vision, the policy aims to elevate the standard of education across the country and prepare teachers who are well-equipped to meet the demands of the 21st-century classroom.

Keywords: National Education Policy 2020, Teacher Education Institutions, Integrated Teacher Education Programs, Professional Development, Multidisciplinary Education, Digital Learning, Educational Reforms, India.

Introduction

The National Education Policy (NEP) 2020 in India introduced comprehensive reforms in the education system, including significant changes to teacher education. The policy emphasizes the need for high-quality teacher education and aims to transform the current system to meet global standards. Here's a detailed overview of how the NEP 2020 addresses Teacher Education Institutions (TEIs) in India:

1. Integrated Teacher Education Programs (ITEP)

The **Integrated Teacher Education Program (ITEP)** is a significant reform introduced in the National Education Policy (NEP) 2020, aimed at overhauling the teacher education system in India. The NEP 2020 recognizes the crucial role of teachers in achieving high-quality education and emphasizes the need to prepare future educators through rigorous, comprehensive, and multidisciplinary training programs.

ITEP refers to a four-year integrated Bachelor of Education (B.Ed.) program that combines subject-specific knowledge with pedagogy and practical training from the outset of a student's higher education journey. The program is designed to replace the current two-year B.Ed. course and aims to set a new standard for teacher education in India.

Key Features of ITEP

Multidisciplinary Approach:

The ITEP is structured to be multidisciplinary, integrating the study of educational pedagogy with other disciplines such as the sciences, humanities, arts, and social sciences. This approach aligns with the NEP 2020's broader vision of providing a holistic and well-rounded education.

Students will major in a specific subject area while simultaneously receiving professional training in teaching methods relevant to that discipline, thereby ensuring that they are well-prepared to teach their chosen subjects at various educational levels.

Early Professional Exposure:

One of the defining characteristics of ITEP is its emphasis on practical, school-based experiences starting early in the program. This includes classroom observations, internships, and teaching practice, allowing students to apply theoretical knowledge in real-world settings throughout their education.

These experiences are designed to provide aspiring teachers with a deeper understanding of the educational environment, classroom management, and student psychology, which are essential skills for effective teaching.

Eligibility and Structure:

The program is available to students immediately after they complete their higher secondary education (Class 12). It integrates undergraduate studies with professional teacher training into a single four-year program, streamlining the process of becoming a qualified teacher.

The structure typically includes core subject courses, pedagogy courses, general education courses, and extensive fieldwork or teaching internships. The aim is to produce teachers who are not only subject matter experts but also skilled educators capable of addressing diverse classroom needs.

Focus on Quality and Standards:

The NEP 2020 mandates that all teacher education programs, including ITEP, adhere to the highest standards of quality. This includes accreditation by recognized bodies and regular evaluation to ensure that the programs meet national and global benchmarks.

The ITEP is expected to be housed within multidisciplinary higher education institutions, promoting the idea that teacher education should be part of a broader academic ecosystem rather than isolated in standalone institutions.

Phasing Out Substandard Programs:

The introduction of the ITEP is part of a broader effort to phase out substandard teacher education programs, particularly the one-year B.Ed. programs and other shorter-duration courses that have been criticized for their inadequate preparation of teachers.

By 2030, the NEP envisions that the four-year ITEP will become the minimum qualification required for teachers in schools, replacing the older models of teacher education.

Benefits of ITEP

Enhanced Teacher Competency:

The comprehensive and integrated nature of the ITEP is designed to improve the overall competency of teachers. Graduates of this program are expected to be better equipped with both content knowledge and pedagogical skills, making them more effective educators.

Consistency and Uniformity:

The standardized structure of the ITEP ensures that all future teachers receive a consistent level of education and training, which helps maintain uniformity in the quality of education provided across different regions and institutions.

Alignment with Global Standards:

The ITEP aligns with global standards for teacher education, ensuring that Indian teachers are competitive and well-prepared to meet international benchmarks. This is especially important as the Indian education system becomes more integrated with global educational practices.

Addressing Teacher Shortages:

By streamlining the teacher education process and raising the standards, the ITEP aims to address both the quality and quantity of teachers in the system. It provides a clear and structured path for students aspiring to enter the teaching profession, which can help alleviate the current teacher shortages in many areas.

Implementation and Future Prospects

The successful implementation of ITEP requires significant investments in infrastructure, faculty development, and curriculum design. The NEP 2020 outlines a phased approach to integrating ITEP into the Indian education system, with the goal of making it the standard model for teacher education by 2030.

Institutions offering the ITEP will need to collaborate closely with schools to provide meaningful practical experiences and ensure that their programs are aligned with the latest educational research and methodologies. The role of technology in delivering these programs, particularly in terms of online learning and digital resources, will also be crucial in expanding access and ensuring quality.

In conclusion, the Integrated Teacher Education Program represents a major step forward in improving the quality of teacher education in India. By providing a rigorous, multidisciplinary, and practical training program, the ITEP aims to produce a new generation of highly competent, well-rounded educators capable of meeting the diverse needs of 21st-century classrooms.

2. Phasing Out of Substandard Institutions

The **National Education Policy (NEP) 2020** has placed significant emphasis on improving the quality of teacher education in India. One of the critical steps outlined in the policy is the **phasing out of substandard Teacher Education Institutions (TEIs)**. This measure aims to address the proliferation of low-quality institutions that have been contributing to the inadequate preparation of teachers, which, in turn, affects the overall quality of education in the country.

Rationale for Phasing Out Substandard TEIs

The NEP 2020 recognizes that the quality of education is directly linked to the quality of teachers, and thus, the institutions responsible for training these teachers must meet high standards. Over the years, many TEIs in India have been criticized for their poor infrastructure, lack of qualified faculty, and inadequate training programs. These institutions have often been more focused on profit-making rather than providing quality education, leading to a large number of underprepared teachers entering the workforce.

Key Issues with Substandard TEIs:

1. **Inadequate Infrastructure**: Many TEIs lack the necessary infrastructure, such as libraries, laboratories, and teaching aids, which are essential for effective teacher training.

2. **Poor Quality of Faculty**: A significant number of these institutions employ faculty who do not meet the minimum qualifications required for teacher educators, resulting in subpar training for future teachers.
3. **Lack of Practical Training**: Substandard TEIs often fail to provide adequate practical training or internships, which are crucial for preparing teachers to handle real classroom situations.
4. **Accreditation Issues**: Many of these institutions operate without proper accreditation or have obtained accreditation through questionable means, bypassing the rigorous standards set by regulatory bodies like the National Council for Teacher Education (NCTE).

NEP 2020's Approach to Phasing out Substandard TEIs

The NEP 2020 outlines a structured approach to phasing out these low-quality institutions:

Strict Accreditation and Quality Standards:

All TEIs are required to obtain accreditation from recognized bodies such as the NCTE. The policy emphasizes that only those institutions that meet the high standards set by these bodies will be allowed to continue operating.

Institutions will undergo regular inspections and assessments to ensure they maintain the required quality standards. Those failing to meet these standards will face closure or will be merged with better-performing institutions.

Multidisciplinary Education and Integration with HEIs:

The policy advocates for the integration of teacher education into multidisciplinary higher education institutions (HEIs). This move is intended to ensure that teacher education is not isolated but rather part of a broader academic environment that encourages interdisciplinary learning.

By 2030, all standalone TEIs are expected to either become part of multidisciplinary HEIs or be phased out. This shift is designed to improve the quality of teacher education by providing access to a wider range of resources and expertise available in multidisciplinary institutions.

Transition to Four-Year Integrated Programs:

The NEP 2020 introduces the four-year integrated Bachelor of Education (B.Ed.) program as the standard for teacher education. This program integrates subject knowledge with pedagogy and practical experience, replacing the shorter, less comprehensive programs offered by many substandard TEIs.

Institutions that cannot upgrade their programs to meet these new standards will be phased out, ensuring that only those capable of delivering high-quality teacher education continue to operate.

Focus on Quality Over Quantity:

The policy emphasizes the need to shift the focus from the quantity of TEIs to the quality of education they provide. This includes reducing the number of TEIs but ensuring that the remaining institutions are of high quality and capable of producing competent and well-prepared teachers.

The NCTE and other regulatory bodies will play a crucial role in monitoring and enforcing these standards, with the authority to close down institutions that do not comply.

Implications of Phasing Out Substandard TEIs

Improved Teacher Quality:

By eliminating substandard institutions, the NEP 2020 aims to significantly improve the quality of teacher training in India. This is expected to lead to better-prepared teachers who are capable of delivering high-quality education to students.

Enhanced Reputation of the Teaching Profession:

The focus on quality and accreditation will help elevate the status of the teaching profession in India. Teachers trained at high-quality institutions will be better equipped to meet the demands of modern education, contributing to the overall improvement of the education system.

Challenges during Transition:

While the phasing out of substandard TEIs is a necessary step, it will require careful implementation to avoid disruptions in the availability of trained teachers. The transition will need to be managed to ensure that students currently enrolled in these institutions can complete their education or be transferred to accredited programs.

Increased Accountability:

The NEP 2020's emphasis on regular assessments and accreditation will increase the accountability of TEIs, ensuring that they continuously strive to meet and maintain high standards.

The phasing out of substandard Teacher Education Institutions as outlined in the NEP 2020 is a crucial step towards improving the overall quality of education in India. By setting stringent accreditation standards, encouraging the integration of TEIs with multidisciplinary institutions, and transitioning to more comprehensive teacher education programs, the policy aims to produce a generation of well-trained, competent teachers. This reform is expected to have a long-term positive impact on the education system, ensuring that all students receive quality instruction from well-prepared educators.

 3. Multidisciplinary Approach and Liberal Education

The National Education Policy (NEP) 2020 of India envisions a transformative shift in the education system, aiming to make it more holistic, inclusive, and multidisciplinary. This policy introduces significant changes and opportunities for teacher education institutions, particularly concerning the multidisciplinary approach and liberal education. Here's an elaboration on how these concepts are integrated and applied:

Multidisciplinary Approach

A multidisciplinary approach involves integrating knowledge and methods from different disciplines to address complex problems and provide a more comprehensive understanding. In the context of teacher education, this approach aims to create well-rounded educators who can draw upon diverse fields of knowledge to enrich their teaching practices and effectively address varied student needs.

Implementation in Teacher Education

Curriculum Design:

Integration of Disciplines: Teacher education curricula are being designed to incorporate elements from various subjects such as psychology, sociology, technology, and pedagogy. This integration helps future teachers develop a broader perspective and innovative teaching strategies.

Project-Based Learning: Encouraging projects that require knowledge from multiple disciplines helps student teachers apply theoretical concepts in practical, real-world scenarios.

Pedagogical Training:

Collaborative Learning: Training programs often include collaborative projects that involve different fields, promoting teamwork and the integration of various skills and knowledge areas.

Interdisciplinary Workshops: Conducting workshops and seminars with experts from various fields helps teacher candidates understand how different disciplines intersect and inform educational practices.

Professional Development:

Continuous Learning: Teacher education institutions are emphasizing the need for ongoing professional development that includes interdisciplinary learning. This approach helps teachers stay updated with new teaching methodologies and subjects.

Liberal Education

Definition and Importance

Liberal education focuses on broad-based knowledge and the development of critical thinking, creativity, and intellectual curiosity rather than specialized vocational training. In teacher education, this approach fosters a well-rounded and adaptable teacher capable of critical reflection and innovative teaching.

Implementation in Teacher Education

Curriculum Flexibility:

Broad Knowledge Base: Teacher education programs are being restructured to include a wide range of subjects beyond just education. This includes humanities, sciences, social sciences, and arts, ensuring that teachers have a diverse knowledge base.

Choice-Based Credit System: The NEP 2020 promotes a flexible curriculum where students can choose courses across disciplines, allowing for a personalized and liberal education experience.

Development of Critical Skills:

Critical Thinking and Reflection: Programs are incorporating modules that emphasize critical thinking, ethical reasoning, and reflective practice. This prepares future teachers to analyze and address complex classroom challenges creatively.

Holistic Development: Emphasis is placed on the development of soft skills such as communication, leadership, and emotional intelligence, which are crucial for effective teaching and student engagement.

Interdisciplinary Projects and Research:

Research Opportunities: Encouraging research that spans multiple disciplines helps teacher candidates engage in inquiry that connects educational theory with practice.

Community Engagement: Liberal education often includes community service and engagement projects, helping teacher candidates understand and address real-world issues within educational settings.

Alignment with NEP 2020

Holistic and Multidisciplinary Education: NEP 2020 advocates for an educational system that is holistic and multidisciplinary. It emphasizes the need for integrating diverse knowledge areas to prepare students for complex future challenges.

Flexible Curriculum and Pedagogy: The policy supports a flexible curriculum and pedagogical practices that cater to diverse learning needs and encourage interdisciplinary learning.

Focus on Critical and Creative Thinking: NEP 2020 stresses the importance of developing critical thinking, creativity, and problem-solving skills, aligning with the principles of liberal education.

Teacher Training and Development: The policy envisions a revamped teacher training system that aligns with global standards, incorporating a multidisciplinary and liberal education approach to enhance teaching quality and effectiveness.

In summary, the NEP 2020's emphasis on a multidisciplinary approach and liberal education represents a significant shift in teacher education. By integrating diverse fields of knowledge and focusing on broad-based skills development, teacher education institutions are better equipped to prepare educators who can meet the evolving demands of the education system and foster a more holistic and effective learning environment for students.

4. Ongoing Professional Development

The **National Education Policy (NEP) 2020** emphasizes the need for **Ongoing Professional Development (OPD)** in Teacher Education Institutions (TEIs) to ensure that educators remain effective, up-to-date, and able to meet the evolving demands of modern education. The policy recognizes that quality education is directly linked to the quality of teachers and that continuous professional development is essential for maintaining and enhancing this quality.

1. Importance of Continuous Professional Development

Lifelong Learning for Teachers: NEP 2020 highlights that teaching is not a static profession; it requires continuous learning and adaptation to new pedagogical techniques, technological advancements, and changes in curriculum. Ongoing professional development ensures that teachers stay informed about the latest educational trends, research, and practices, enabling them to provide high-quality education.

Adapting to Technological Changes: With the increasing integration of Information and Communication Technology (ICT) in education, teachers need to be proficient in using digital tools and platforms. Continuous professional development helps teachers acquire and refine these skills, allowing them to effectively incorporate technology into their teaching.

2. Structured Professional Development Programs

In-Service Training Programs: The NEP 2020 advocates for regular in-service training programs that are tailored to the specific needs of teachers at different stages of their careers. These programs can include workshops, seminars, online courses, and peer learning opportunities. The goal is to provide teachers with ongoing opportunities to improve their pedagogical skills and subject knowledge.

Modular Courses and Micro-Credentials: The policy suggests the introduction of modular courses and micro-credentials that allow teachers to specialize in specific areas of interest or need. These credentials can be accumulated over time and contribute to career advancement, ensuring that professional development is both meaningful and aligned with teachers' career goals.

3. National Professional Standards for Teachers (NPST)

Establishment of NPST: The NEP 2020 proposes the development of National Professional Standards for Teachers, which will outline the competencies, skills, and knowledge that teachers are expected to

acquire and maintain throughout their careers. These standards will serve as a benchmark for professional development programs, ensuring that they are aligned with national educational goals.

Career Progression Linked to Professional Development: The NPST will also be linked to career progression, with opportunities for teachers to advance in their careers based on their participation in professional development activities and their ability to meet or exceed the standards.

4. Use of Technology in Professional Development

Online Learning Platforms: The NEP 2020 encourages the use of digital platforms for professional development, providing teachers with access to a wide range of resources and learning opportunities. Online platforms can offer flexibility, allowing teachers to learn at their own pace and according to their schedules. This is particularly important for teachers in remote or underserved areas.

Blended Learning Models: The policy promotes blended learning models that combine online and face-to-face learning. This approach allows teachers to benefit from the convenience of online learning while also engaging in collaborative and interactive sessions that enhance their understanding and application of new knowledge.

5. Mentoring and Peer Learning

National Mission for Mentoring: The NEP 2020 introduces the idea of a National Mission for Mentoring, which will involve experienced educators mentoring new or less experienced teachers. This mentoring will provide personalized guidance, support, and feedback, helping teachers to develop their skills and confidence.

Peer Learning Networks: The policy encourages the establishment of peer learning networks where teachers can share best practices, collaborate on projects, and provide mutual support. These networks can be local, regional, or national, fostering a culture of continuous improvement and professional collaboration.

6. Incorporating Feedback and Reflection

Reflective Practice: The NEP 2020 emphasizes the importance of reflective practice in professional development. Teachers are encouraged to regularly reflect on their teaching practices, assess their effectiveness, and identify areas for improvement. Professional development programs should include opportunities for teachers to engage in reflective activities, such as journaling, peer observation, and feedback sessions.

Feedback Mechanisms: Continuous feedback from students, peers, and supervisors is vital for professional growth. The policy advocates for the incorporation of robust feedback mechanisms in professional development programs, ensuring that teachers receive constructive feedback that they can use to enhance their practice.

7. Challenges and Implementation

Access and Equity: One of the challenges in implementing ongoing professional development is ensuring that all teachers, regardless of their location or the resources available to them, have access to high-quality professional development opportunities. The NEP 2020 calls for the use of ICT and other innovative solutions to bridge this gap and make professional development accessible to all.

Institutional Support: Successful implementation of professional development initiatives requires strong institutional support. Schools and educational authorities must prioritize professional

development, allocate sufficient resources, and create a culture that values and encourages continuous learning.

The NEP 2020's focus on Ongoing Professional Development in Teacher Education Institutions reflects a commitment to enhancing the quality of teaching in India. By providing structured, technology-enhanced, and reflective professional development opportunities, the policy aims to equip teachers with the skills and knowledge needed to meet the challenges of 21st-century education. As these initiatives are implemented, they have the potential to significantly improve educational outcomes, foster innovation in teaching practices, and ensure that Indian teachers are well-prepared to educate the next generation.

5. Focus on Quality and Research

The National Education Policy (NEP) 2020 emphasizes enhancing the quality and research capabilities within teacher education institutions to improve the overall educational system. Here's an in-depth look at how the policy addresses these aspects:

Focus on Quality in Teacher Education

Definition and Importance

Quality in teacher education refers to the standards of teaching, curriculum design, faculty expertise, and the overall effectiveness of teacher preparation programs. High-quality teacher education ensures that future educators are well-equipped to foster learning and address diverse classroom needs.

Implementation in Teacher Education

Curriculum and Pedagogy:

Updated Curriculum: NEP 2020 encourages the modernization of curricula to include contemporary educational theories, practices, and technologies, ensuring relevance and effectiveness in training teachers.

Pedagogical Innovations: The policy promotes the adoption of innovative teaching methods and practices that reflect current educational research and technological advancements.

Faculty Development:

Training and Up gradation: Emphasis is placed on regular professional development for faculty members, including workshops, seminars, and higher studies, to keep them updated with the latest educational trends and research.

Quality Assurance: Implementing robust quality assurance mechanisms to evaluate and enhance faculty performance and teaching quality.

Infrastructure and Resources:

Enhanced Facilities: Investment in modern facilities and educational resources such as libraries, technology, and research labs to support effective teaching and learning.

Support Systems: Developing support systems like counseling, mentoring, and academic advising to aid student teachers' growth and development.

Assessment and Accreditation:

Regular Assessments: Implementing regular assessments of teacher education programs to ensure adherence to quality standards.

Accreditation Framework: Establishing or reinforcing accreditation frameworks to maintain and enhance the quality of teacher education institutions.

Focus on Research in Teacher Education

Definition and Importance

Research in teacher education involves systematic inquiry into teaching methods, learning processes, educational outcomes, and the overall effectiveness of educational practices. It plays a crucial role in advancing educational theories and improving classroom practices.

Implementation in Teacher Education

Research Integration:

Curriculum Incorporation: Integrating research components into the teacher education curriculum, encouraging future educators to engage in and contribute to educational research.

Project-Based Research: Promoting research projects that address real-world classroom challenges and contribute to evidence-based teaching practices.

Research Funding and Support:

Grants and Scholarships: Providing funding and scholarships for research initiatives, enabling educators and students to conduct meaningful research in education.

Institutional Support: Establishing research centers or units within teacher education institutions to support and facilitate research activities.

Professional Development in Research:

Research Training: Offering training and development programs focused on research methodologies, data analysis, and academic writing to enhance research skills among faculty and students.

Publication and Dissemination: Encouraging publication of research findings in academic journals and conferences, promoting the dissemination of new knowledge and practices.

Collaborations and Partnerships:

Academic Partnerships: Fostering collaborations with other academic institutions, research organizations, and educational bodies to enhance research opportunities and impact.

International Engagement: Engaging in international research networks and projects to gain insights and contribute to global educational research.

Alignment with NEP 2020

Quality Assurance: NEP 2020 emphasizes the need for high-quality education and training programs. It advocates for continuous improvements in curriculum, pedagogy, and faculty development to ensure high standards in teacher education.

Research Promotion: The policy highlights the importance of research in enhancing educational practices and outcomes. It encourages integrating research into teacher education to drive innovation and evidence-based teaching.

Holistic Development: NEP 2020 envisions teacher education institutions as centers of excellence that not only provide high-quality training but also engage in impactful research, contributing to the overall improvement of the education system.

Institutional Autonomy and Accountability: The policy supports granting greater autonomy to institutions while ensuring accountability through quality assurance mechanisms, fostering an environment conducive to both high-quality education and research.

In summary, NEP 2020's focus on quality and research in teacher education institutions reflects a commitment to elevating educational standards and fostering a culture of continuous improvement and innovation. By enhancing the quality of teacher preparation and encouraging rigorous research, the policy aims to create a more effective and responsive education system.

6. Regulatory Reforms

The National Education Policy (NEP) 2020 introduces several regulatory reforms aimed at transforming teacher education institutions in India. These reforms are designed to enhance the quality of teacher preparation, ensure better standards, and promote a more flexible and integrated education system. Here's an in-depth look at these regulatory reforms:

1. Institutional Autonomy and Governance

Enhanced Autonomy

Devolution of Powers: NEP 2020 promotes greater autonomy for teacher education institutions (TEIs) to foster innovation and responsiveness to local needs. Institutions are encouraged to design their own curricula and pedagogical strategies within a broad regulatory framework.

Governance Structures: Institutions are advised to establish robust governance structures that include academic, administrative, and financial autonomy. This includes forming autonomous bodies or councils to oversee academic and administrative functions.

Accountability Measures

Regulatory Framework: Although autonomy is encouraged, institutions are required to adhere to specific quality standards and regulations set by national bodies. This ensures that increased autonomy does not compromise educational quality.

Transparency: Institutions must maintain transparency in their operations, including admissions, faculty appointments, and financial management, to ensure accountability and public trust.

2. Curriculum and Pedagogical Reforms

Curriculum Flexibility

Choice-Based Credit System (CBCS): NEP 2020 encourages the implementation of a Choice-Based Credit System, allowing students to select from a variety of courses and create a personalized learning experience.

Integration of Multidisciplinary Subjects: The policy recommends integrating subjects from various disciplines into the teacher education curriculum to provide a more comprehensive and holistic education.

Pedagogical Innovations

Outcome-Based Education: Emphasis is placed on outcome-based education, where the focus is on achieving specific learning outcomes rather than merely completing syllabus requirements.

Innovative Teaching Methods: Teacher education institutions are encouraged to adopt innovative teaching methods and technologies to enhance learning experiences and effectiveness.

3. Accreditation and Quality Assurance

National Accreditation Framework

Establishment of Accreditation Bodies: NEP 2020 calls for the strengthening and establishment of accreditation bodies to assess and ensure the quality of teacher education institutions.

Regular Evaluations: Institutions are subject to regular evaluations and accreditations based on predefined standards to ensure they meet quality benchmarks.

Quality Assurance Mechanisms

Internal Quality Assurance Cells (IQACs): Institutions are advised to set up Internal Quality Assurance Cells to continuously monitor and improve the quality of education and institutional processes.

National and Regional Standards: The policy emphasizes the creation of national and regional standards for teacher education to ensure consistency and high quality across institutions.

4. Teacher Education Framework and Standards

National Curriculum Framework for Teacher Education (NCFTE)

Framework Development: NEP 2020 supports the development and implementation of a National Curriculum Framework for Teacher Education, which outlines the essential standards and guidelines for teacher preparation programs.

Curriculum Design: This framework will guide institutions in designing curricula that align with national educational goals and standards.

Competency-Based Standards

Competency Framework: Institutions are encouraged to adopt a competency-based approach for teacher training, focusing on the development of specific skills and competencies required for effective teaching.

Professional Standards: Establishing clear professional standards and competencies for teachers ensures that teacher preparation programs are aligned with the needs of the education system.

5. Research and Development

Promoting Research

Research Grants: NEP 2020 advocates for providing grants and funding for research in teacher education, enabling institutions to engage in high-quality educational research.

Research Centers: Establishing research centers within institutions to focus on educational practices, innovations, and challenges.

Collaboration and Knowledge Exchange

Partnerships: Encouraging partnerships between teacher education institutions and research organizations, universities, and international bodies to enhance research and development in education.

Knowledge Dissemination: Facilitating the dissemination of research findings through publications, conferences, and workshops.

6. Integration with the School Education System

Stronger Linkages

School-College Linkages: Strengthening the link between teacher education institutions and schools to ensure that teacher training is relevant and addresses the practical needs of schools.

Field Experience: Enhancing field experience and practicum components in teacher education programs to provide hands-on training and real-world exposure to student teachers.

Continuous Professional Development

Ongoing Training: Emphasizing the importance of continuous professional development for teachers through in-service training, workshops, and seminars to keep them updated with the latest educational practices and policies.

6. Regulatory Bodies and Oversight

National Educational Technology Forum (NETF)

Technology Integration: NEP 2020 proposes the establishment of a National Educational Technology Forum to promote the integration of technology in education, including teacher training programs.

National Educational Accreditation Council (NEAC)

Regulatory Oversight: The policy envisions a National Educational Accreditation Council to oversee the accreditation process and ensure that institutions adhere to the established standards and guidelines.

 7. Empowering Teachers

The National Education Policy (NEP) 2020 emphasizes empowering teachers as a central component in transforming the education system. This empowerment is aimed at enhancing teachers' skills, status, and capacity to drive educational excellence. Here's how NEP 2020 addresses this objective in teacher education institutions:

1. Professional Development and Training

Continuous Professional Development

Ongoing Training Programs: NEP 2020 promotes regular and systematic professional development through workshops, seminars, and training programs. These initiatives are designed to keep teachers updated with the latest educational practices, technologies, and pedagogical strategies.

Advanced Degrees and Specializations: Encouragement for teachers to pursue higher qualifications and specializations to enhance their expertise and career prospects.

Pedagogical and Technological Skills

Innovative Pedagogy: Training in innovative and learner-centric pedagogical methods to foster engaging and effective teaching practices.

Technology Integration: Professional development programs include training on integrating digital tools and technologies into the classroom, enhancing both teaching and learning experiences.

2. Curriculum and Pedagogical Autonomy

Curriculum Flexibility

Autonomous Curriculum Design: NEP 2020 allows teacher education institutions greater autonomy in designing their curricula, enabling them to tailor programs to address local educational needs and innovations in pedagogy.

Choice-Based Learning: Implementation of a Choice-Based Credit System (CBCS) that offers teachers and students flexibility in selecting courses, fostering a personalized and diverse educational experience.

Pedagogical Innovations

Adoption of New Teaching Methods: Encouragement to adopt new and diverse teaching methods and approaches, such as project-based learning, experiential learning, and interdisciplinary teaching.

Student-Centric Approach: Focus on creating learner-centric environments that promote critical thinking, creativity, and problem-solving skills.

3. Support Systems and Infrastructure

Infrastructure Improvement

Modern Facilities: Investment in state-of-the-art facilities, including well-equipped classrooms, libraries, and technology labs, to support effective teaching and learning.

Resource Accessibility: Ensuring access to up-to-date educational resources and materials that aid teachers in delivering high-quality instruction.

Supportive Environment

Mentoring and Counseling: Establishing mentoring and counseling programs to provide guidance and support to teachers, addressing their professional and personal development needs.

Collaborative Platforms: Creating platforms for teachers to collaborate, share best practices, and engage in peer learning and support networks.

4. Recognition and Incentives

Professional Recognition

Awards and Honors: Introduction of awards and recognition programs to celebrate outstanding teaching practices and contributions to education.

Career Advancement: Clear pathways for career advancement and promotions based on merit, performance, and contributions to educational innovation and research.

Incentives

Financial Incentives: Providing financial incentives such as grants and fellowships for research, innovation, and further education.

Research Opportunities: Encouragement to participate in research and development projects, with support for publishing findings and applying research outcomes in the classroom.

5. Autonomy and Decision-Making

Increased Autonomy

Institutional Decision-Making: Empowering teachers with greater autonomy in institutional decision-making processes, including curriculum design, pedagogical strategies, and administrative roles.

Professional Input: Involving teachers in policy formulation and educational reforms to ensure that their insights and experiences inform decisions.

Leadership Development: Offering training and opportunities for teachers to take on leadership roles within schools and educational institutions, fostering their growth as educational leaders and decision-makers.

6. Inclusion and Diversity

Inclusive Education

Diverse Training Programs: Developing training programs that address diverse student needs and promote inclusive education practices, ensuring that all students receive equitable and effective instruction.

Cultural Competency: Training teachers to be culturally competent and sensitive to the diverse backgrounds and needs of students.

Support for Marginalized Groups

Targeted Programs: Implementing programs to support teachers from marginalized or disadvantaged backgrounds, ensuring equal opportunities for professional growth and development.

7. Alignment with NEP 2020 Objectives

Vision of Holistic Development

Holistic Education: NEP 2020's vision of holistic development aligns with empowering teachers to foster well-rounded, creative, and critical-thinking students.

Integration of Skills: Emphasis on integrating 21st-century skills and competencies into teacher education to prepare educators for evolving educational demands.

Systemic Change

Transformative Impact: Empowering teachers is central to the NEP's goal of transforming the educational ecosystem, ensuring that teachers are well-prepared to drive meaningful change and enhance the quality of education.

In summary, NEP 2020's approach to empowering teachers focuses on continuous professional development, curriculum autonomy, improved infrastructure, recognition, and inclusion. By enhancing teachers' skills, autonomy, and support systems, the policy aims to build a more effective, innovative, and responsive education system.

Conclusion

In conclusion, the National Education Policy (NEP) 2020 represents a transformative shift for teacher education institutions, heralding a new era of excellence, innovation, and inclusivity. By emphasizing a multidisciplinary approach, liberal education, quality enhancement, regulatory reforms, and the empowerment of teachers, NEP 2020 aims to create a dynamic and responsive educational framework. These reforms are designed to address the evolving needs of the education system, ensuring that teacher education institutions produce well-rounded, competent educators who are equipped to inspire and lead future generations. Through the implementation of these strategic measures, NEP 2020 envisions a more effective, equitable, and progressive educational landscape, positioning India at the forefront of global educational advancement.

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IMPORTANCE OF DIGITAL LIBRARY FOR STUDENTS

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Abstract

During the past recent years, there has been tremendous development reaming the concept of digital libraries, the biggest online platform of knowledge that can be stored and retrieved through online networks. Digital libraries are considered as the most complex form of data systems that associate with the digital document preservation, distributed database management, hypertext, filtering, information retrieval, and selective dissemination of information. This has really overcome geographical barrier offering a wide range of academic, research, and cultural resources with multimedia effects which can be accessed around the world over the distributed networks. The study also highlighted the information on the digital library projects undertaken in countries.

This article provides information to the audience on the subject matter in terms of what has been already discovered and explored on the importance of Digital Library and what all can be further explored. The literature pertaining to the studies relating to how digital libraries emerged discussed in this article. The idea is to brief the readers about the concept of library resources shifted into digital libraries with the help of technology and its growth sourced from already existing literature. The contemporary trends reflecting the current state of the library and how it has progressed over time also discussed here.

Keywords: Digital Libraries, Electronic resources, Digital resources

In today's digital age, the traditional library is no longer the only option for students seeking information and knowledge. The emergence of electronic libraries or e-libraries has transformed the way students access information, making it easier, quicker and more convenient to find and retrieve information than ever before.

The importance of digital libraries for students cannot be overstated. It allows students to access information from anywhere, at any time, with just a few clicks of a mouse or taps on a screen. Digital library offer a wealth of resources that can help students broaden their knowledge, improve their research skills, and boost their academic performance. Students can also access digital materials that may not be available in traditional libraries, providing them with access to the latest information and research in their field of study.

Moreover, e-libraries can help students save money by eliminating the need to purchase costly textbooks and reference materials.

Digital Library and Its Purpose?

Digital library is a collection of digital resources that are accessible to users via the internet. These resources can include books, articles, journals, research papers, multimedia materials, and other types of content. The purpose of an e-library is to provide users, including students looking for the best primary school, with easy and convenient access to a vast array of information from anywhere and at any time. Digital library also provide benefits such as cost-effectiveness, space-saving, and the ability to search and retrieve information quickly and

efficiently. They are particularly useful for students, researchers, and professionals who need access to up-to-date information and resources for their work.

What Are The Types of Digital Library?

There are several types of digital libraries, including:

Academic Digital Libraries:

These are digital libraries that support academic research and education. They typically contain scholarly resources such as journals, research papers, and academic books.

Public Digital Libraries:

These are digital libraries that provide access to resources for the general public. They may contain resources such as e-books, audiobooks, and online magazines.

Specialized Digital Libraries:

These are digital libraries that focus on a particular topic or subject area. Examples include medical digital libraries, legal digital libraries, and digital libraries for the arts.

National and International Digital Libraries:

These are digital libraries that are created by governments or international organizations to provide access to information and cultural heritage. Examples include the Library of Congress and the European Digital Library.

Corporate Digital Libraries:

These are digital libraries created by organizations for their employees or customers. They typically contain resources such as training materials, technical documents, and marketing materials.

What Are The Features of A Digital Library?

Here are some of the key features of digital libraries:

Access To Digital Resources:

Digital libraries provide users with access to a wide range of digital resources such as e-books, audiobooks, videos, images, research papers, and academic journals.

24/7 Availability:

Digital libraries are available to users 24/7, providing them with convenient access to resources from anywhere and at any time.

Search and Retrieval:

Digital libraries provide users with powerful search tools that allow them to quickly and easily find the resources they need.

Remote Access:

Users can access digital libraries remotely using their personal devices such as computers, tablets, or smartphones.

Cost-Effective:

Digital libraries are often more cost-effective than traditional libraries as they eliminate the need for physical space, maintenance, and staffing.

Personalization:

Digital libraries allow users to customize their experience by creating personalized accounts, saving their search history, and setting up alerts for new resources.

Preservation:

Digital libraries enable the preservation of cultural heritage and information by digitising and archiving rare or fragile materials for future generations.

Importance of a Digital Library for Students

● **It Gives the Reader Access to Up-To-Date Information**

An e-library provides the reader with access to up-to-date information on various topics. With digital resources updated regularly, readers can stay informed with the latest research and developments in their field of interest.

● **No Fixed or Rigid Time Limit**

Digital libraries have no fixed or rigid time limit, allowing users to access resources at any time and from any location. This flexibility makes it easy for users to study or conduct research at their own pace and convenience.

● **It Preserves Resources and Knowledge**

Digital libraries play a crucial role in preserving resources and knowledge for future generations. By digitising rare or fragile materials, digital libraries ensure that these resources are available to researchers and students worldwide, thus contributing to the preservation of cultural heritage and intellectual property.

● **It Is Easily Accessible**

Digital libraries are easily accessible to users, as they can access resources remotely using their personal devices. This accessibility eliminates the need for users to visit physical libraries, saving them time and effort while ensuring that they have access to a vast array of digital resources from anywhere and at any time.

● **Improves Interaction In Real-Time**

Digital libraries enable real-time interaction among users by facilitating collaboration, discussion, and sharing of resources. With the use of online forums, chat rooms, and other interactive tools, users can connect with each other, share ideas, and engage in meaningful discussions, thereby enhancing their learning experience.

● **Automated Library Management**

Digital libraries employ automated library management systems that help in the efficient organization, storage, and retrieval of digital resources. These systems automate routine tasks such as cataloguing, indexing, and archiving, freeing up library staff to focus on more important tasks such as user support and collection development.

● **Quick Access**

Digital libraries provide users with quick access to resources, with powerful search tools that enable users to quickly and easily find the information they need. This quick access saves users time and effort, making it easier for them to conduct research or study efficiently.

● **24/7 Availability**

Digital libraries are available to users 24/7, eliminating the need to worry about library opening hours. Users can access digital resources at any time and from any location, making it convenient for them to study, conduct research, or access information whenever they need it.

● **Collaboration**

Digital libraries facilitate collaboration among students by allowing them to share resources, discuss ideas, and work together on projects.

● **Environmental Sustainability**

Digital libraries contribute to environmental sustainability by reducing the use of paper and other resources required for traditional libraries.

Conclusion

 Digital libraries play a crucial role in providing school admission in noida students with access to a vast array of digital resources, which can enhance their academic performance and broaden their knowledge. Digital libraries are cost-effective, convenient, and easily accessible, with powerful search tools that enable students to find information quickly and efficiently.

Digital libraries also provide real-time interaction, collaboration, and sharing of resources, which can improve students' research skills and learning experience. Moreover, digital libraries contribute to environmental sustainability by reducing the use of paper and other resources required for traditional libraries, while also preserving cultural heritage by digitising and archiving rare or fragile materials for future generations. In today's digital age, digital libraries are an indispensable resource for students seeking to excel in their academic pursuits.

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STUDY ON OPINION OF PG TEACHERS ON CAREER MATURITY AND EMPLOYABILITY SKILLS IN POSTGRADUATE CURRICULA OF KUVEMPU UNIVERSITY

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Abstract

The higher education in India looks promising with a focus on technology, personalized learning, and Skill development. There is a global trend towards a "Reskilling Revolution," but educational providers are still under delusion that the system is working -over 70% of education providers say students are ready for employment, while less than 50% of students and employers think the same. 40% of employers report the opposite–they have a hard time trying to fill entry-level positions largely due to lack of preparation. Hence Higher education associations are now coerced for advancing the student's employability skills. The primary goals of Higher Education Institutions is to ensure that all students develop the skills necessary to respond to promptly changing employment market requirements and conditions. Universities must consider how they train their students to be employable graduates. Despite increasing teaching, employment is connected with an appropriate learning environment and curriculum. The development of employability is one of the goals of university education. For this purpose students to acquire employability skills as a part of their educational foundation before they can be successful in career development. Therefore the present study analyse the Employability Skills of Career Maturity aspects in the discipline of Arts, Science and Commerce. Further this study aims to analyse the opinions of postgraduate Teachers in enhancing employability aspects in presence respective Curricula among postgraduate students of Kuvempu University.

Key Words*: Career Maturity, Postgraduate Teacher, Postgraduate Students, Curriculum, Employability Skills.*

Introduction:

Higher education plays a vital role in any country's so-Higher Education institutions play a very important role in socio-economic development of any country. Its role is to equip the youth with the required norms, values, knowledge, skills, and abilities that will prepare them for greater challenges ahead of them and make a positive impact on the country's development. But In India many young people graduating from our education system and receiving University degrees are still facing employment challenges. In 2007 late former President of India, A.P.J. Abdul Kalam in his convocation address at Bangalore University said, "It is not unemployment which is a major problem; it is the question of 'Unemployability' which is a bigger crisis". At that time, we discovered that 70% of our graduates lacked the essential skills needed for a job. Even if things have somewhat improved over time, fewer than half of Indian graduates are still as unemployable evidenced by the India Skills Report 2021, where only 45.9 per cent of graduates were found employable as of 2021, a decline from 46.21 per cent in 2020 and 47.38 per cent in 2019. The numerous research findings show that since the curriculum is at the core of any higher education program requiring frequent updates with newly emerging knowledge, skills, and attitudes to prepare graduates to cope with the rapid change. Therefore the development of employability should be one of the goals of university education. There is a need to enrich the higher education curriculum to meet the twenty-first-century challenges. The curriculum design should stress the development of higher education students potential with special concern

on employability skills curriculum aspects such as Academic Learning, Experiential Learning, Career Maturity, Professional Skills, Career Management, Meaningful Connections, and Global Perspective. Many universities in Australia, New Zealand, and the UK are now Career Maturity and Career Management programs in their degrees with the aim of enhancing graduate employment prospects. Career Maturity is one of the aspects in the graduate employability curriculum. The PG curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career and helps the student to articulate their skills competencies, interest and motivations in relation to their career choice.

Significance of the Study: Education system must aim towards employability and ensure quality in education. There is a large gap in the availability of employability skill. To bridge the gap, an interface is needed between the curriculum needs of the workplace. (A.P.J. Abdul Kalam) Currently Indian youth have more of unemployability rather than unemployment problem. Although there are number of employment opportunities students are not able to grab jobs as they are not equipped with employability skills. According to the estimates of the National Association of Software and Service Companies (NASSCOM), only 25 per cent of graduates are employable, and 75 per cent are not easily employable. There are several reasons for the present unemployability status of Indian youth like system/ structural issues, unavailability of teachers, and infrastructure, out dated syllabus, insufficient practical sessions, absence of career counselling and guidance facilities, and so on. The current educational system emphasizes more on knowledge dissemination and less of job creation. The deficiency of career maturity indicators include aspects of planning, exploration, informational competence and decision making. Good curriculum design will attract more interest in developing a number of skilful practices. So, the present study was undertaken to investigate the inducing aspects of employability in the postgraduate curriculum of Kuvempu University to explore the aspects of employability among postgraduate students. The identifying the opinions of postgraduate teachers & students about the career maturity employability aspects of presence PG curriculum.

Definition of Employability: Employability refers to a person's capability of gaining initial employment, maintaining employment and obtaining new employment if required (Hillage and Pollard, 1998).

Definition of Employability Skill: Employability Skill are all about the ability of individuals to exhibit their skills to the prospective employers and the ability to execute the tasks thereby achieving organizational goals and objectives. The Allen Consulting Group Report (2006) refers the employability skills by several other names, including key skills, core skills, life skills, generic skills, essential skills, key competencies, necessary skills and transferable skills. Employability Skills refer to specific skills essential for employment. Generic skills also known as 21st century skills are an important element of employability. (Kearns, 2001)

Graduate Employability Curriculum: Soft skills play an essential role in this dynamic trading age. In the present scenario, there is an enormous mass of capable job seekers in society and competition within them for the acquisition of jobs and the sustainability of employment becomes more difficult. One of the ways to improve the employability skills of graduates is to integrate that training into the

curriculum into the subject. The main aim is to integrate and reinforce the development and enhancement of employability.

Career Maturity: Employability skills are strongly related to the various skills needed for graduates to better prepare themselves to enter and obtain work, make it easier to develop at work, and ultimately achieve success at work. Students who have work skills are ready to apply their knowledge through a career according to the stage of development which can be seen from being able to plan a career, being willing to explore a career, having good knowledge about careers, having extensive knowledge about the world of work, being realistic in choosing a career, and being oriented. (W. T. Marasaoli.et al.)

Objectives of the Study:

1) To identify the presence of Career Maturity related aspects of Employability skills in selected Postgraduate Curricula of Kuvempu University as perceived by Teachers of Postgraduate departments.

2) The Opinions of Postgraduate Teachers regarding the Career Maturity aspects to be included in presence respective curriculum to enhance employability skills among Postgraduate students of Kuvempu University.

Methodology: The survey design was chosen for this study because it was found to be most appropriate to collect information directly about teachers regarding aspects of employability in the PG curriculum.

Sampling Design: The population of this study includes Arts, Science and Commerce teachers selected from 14 departments. 76 teachers serving in the selected department were considered through purposive sampling technique for this study.

Tool used for the study: The investigator tool *Teacher's opinion regarding the availability Employability Skills of Postgraduate Curriculum-*Developed by Shilpa.V and S.S. Patil for the collection of data.

Statistical Techniques: The researcher used Percentage Analysis, Inferential techniques for analysis of the data.

Analysis of the data: The data is analysed as follows:

Objective-1: To identify the presence of Career Maturity related aspects of Employability skills in selected Postgraduate Curricula of Kuvempu University as perceived by Teachers of Postgraduate departments.

Hypothesis: There is no significant difference between the opinions of the teaching faculty of Arts, Science and Commerce disciplines with reference to the aspects of Employability in the Curriculum.

Item No-1: The postgraduate curriculum includes providing a planned outline of careers information, careers advice and guidance.

Group Statistics	Discipline	Responses								Total %	
		Strongly Agree		Agree		Disagree		Strongly Disagree			
		N	%	N	%	N	%	N	%	N	%
Employability Aspects of curriculum	Arts	4	13.33	15	50	8	26.66	3	10	**30**	**100**
	Science	5	13.51	25	67.56	6	20	1	2.70	37	100
	Commerce	0	0	8	88.88	1	11.11	0	0	9	100
	Total	9	11.84	48	63.15	15	19.73	4	5.26	**76**	**100**

Figure- 1: Shows the percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum providing a planned outline of careers information, careers advice and guidance.
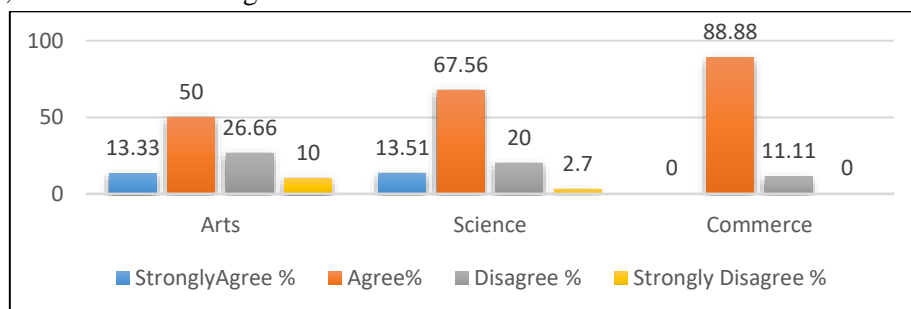
The percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum providing a planned outline of career information, career advice and guidance, was calculated. Table (1) revealed that 13.33% of Arts teachers Strongly Agree, 50% Agree, 26.66 % and 10% strongly disagree. Among the Science teachers 13.51% Strongly Agree, 67.56 % Agree, 20% disagree and 2.7% Strongly disagree 88.88% among the Commerce teachers Agree, 11.11% disagree, 0%Strongly Agree and no teachers Strongly disagree.

It is clear that majority of the teachers of all the three discipline either strongly agree or agree that the curriculum of their respective subjects providing a planned outline of careers information, careers advice and guidance. There is less disagreement and low less strongly disagreement about the above mentioned employability aspects.

However the Commerce PG Teachers (Strongly Agree=0%, Agree=88.88%) about the aspects of curriculum providing a planned outline of careers information, careers advice and guidance. Followed by Science PG Teachers (Strongly Agree=13.51%, Agree=67.56%) and Arts PG Teachers (Strongly Agree= 13.33%, Agree=50%).

Item No: 2.The postgraduate curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career.

Group Statistics	Discipline	Responses									
		Strongly Agree		Agree		Disagree		Strongly Disagree		Total %	
		N	%	N	%	N	%	N	%	N	%
Employability Aspects of curriculum	Arts	6	20	18	60	3	10	3	10	30	100
	Science	8	21.62	27	72.97	2	5.40	0	0	37	100
	Commerce	1	11.11	8	88.88	0	0	0	0	9	100
	Total	15	19.73	53	69.73	5	6.57	3	3.94	76	100

Figure-2: Shows the percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the postgraduate curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career.
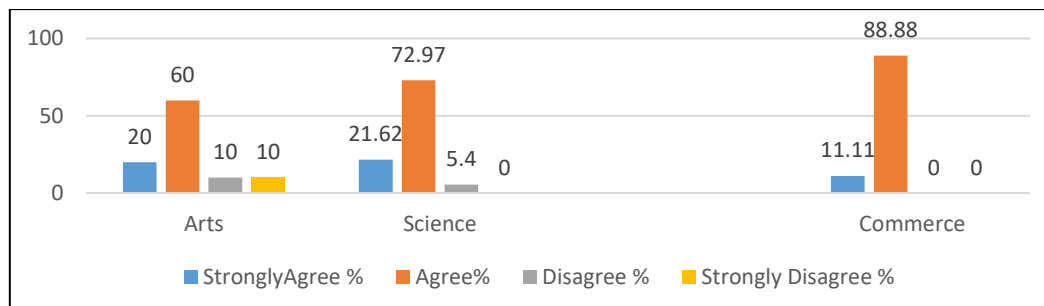
The percentage scores of the opinions of the PG teachers of Arts, Science, and Commerce regarding the aspect that the PG curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career, was calculated. Table (2) revealed that 20% of Arts teachers Strongly Agree, 60% Agree, 10 % and 10% strongly disagree. Among the Science teachers 21.62% Strongly Agree 72.92 % Agree, and 5.4% disagree. 88.88% among the Commerce teachers Agree, 11.11% disagree, 0% Strongly Agree and no teachers Strongly disagree.

It is clear that majority of the teachers of all the three discipline either strongly agree or agree that the curriculum of their respective subject's curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career. There is less disagreement and low strongly disagreement about the above mentioned employability aspects.

However the Commerce PG Teachers (Strongly Agree=11.11%,Agree=88.88%) about the aspects of curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career, Followed by Science PG Teachers (Strongly Agree=21.62%, Agree=72.92%)and Arts PG Teachers (Strongly Agree= 20%, Agree=60%).

Objective-2: The Opinions of Postgraduate Teachers regarding the Career Maturity aspects to be included in presence respective curriculum to enhance employability skills among Postgraduate students

Findings related to the Opinions of Postgraduate Teachers regarding the Career Maturity aspects to be included in respective PG Curriculum to enhance Employability Skills among Postgraduate Students is presented as follows:

1 The PG curriculum should be focused on communication skills, students usually fail to communicate properly the stuff they have understood, this may be oral or in written form. For this, the sessions like group discussions, seminars, interactions, tests, assessments, etc. should be given prominence.

2 The PG curriculum should be include progressive and encourage motivation to students for their future in a global society. Organizing workshops, discussions with experts, demonstrations of skills, mock interviews and training programs for the students.

3 Curriculum should provide learning opportunities and activities through workshops or career advising programs and work integrated courses, also create innovative and analytical thinking in students and support their creativity and originality to develop their social influencing and leadership qualities.

4 The postgraduate curriculum encourages students to take up projects and interactions with the industries, other universities and institutions. Curriculum must include an internship program as if would help the students to get employment.

5 PG curriculum needs to include knowledge of current education related policy and curriculum will be helpful for students to understanding the world of work. Current affairs and investigations. So that it will be helpful for students to understand the world affair.

6 Curriculum should create opportunities for students to be collaborating with other universities, pharma-companies, etc. workshops for developing their professionalism and strong work ethics. Department should take initiative to arrange campus interviews for students that would be helpful for students to be employable.

7 PG curriculum should be involved in oral and written communication skills on monthly basis. Basic technology knowledge should be included in their daily classes. Finally shining up students Curriculum Vitae.

8 The curriculum should be develop entrepreneurship skills and students perceive business opportunities. Hence Physics graduates should be aware of equal concern for product quality as well as product cost.

9 The curriculum should facilitate corporate training to students. University should focus on placement activity. Department of Management specially concentrates towards practical skills by industry visits.

10 The curriculum need be designed in such a way where it majority focused about the industry based learning. Apart from this, the curriculum need to be incorporated with the logical reasoning, aptitude and General Knowledge related courses, so that the students can also get placement in public sectors.

11 The curriculum should provide instructors and program managers with additional instructional support, and students need to learn life skills, such as the capacity to manage pressure and disappointment.

12 Improvement of the basic infrastructure facility required for the students to improve their practical skills that will improve the employability. For the university one common coaching center required to conduct training/coaching classes to make the students more competitive & to be successful in the competitive exams.

Findings of the Study: In the present study investigator has attempted to find the significant difference between the opinions of the teaching faculty of Arts, Science, and Commerce discipline with reference to the dimension of Career Maturity first aspects of Employability in the Curriculum. Researcher observed from the opinions of the PG teachers providing a planned outline of careers information, careers advice and guidance in their curriculum seems to be more agreement with regard to the Commerce teachers followed by Science teachers compared to that of Arts teachers.

The opinions of the teaching faculty of Arts, Science, and Commerce discipline with reference Career Maturity second aspects of Employability in the Curriculum.

Researcher observed from the opinion of the PG teachers regarding second aspects of employability curriculum includes personality development skills programme for the purpose of achieving overall progress of the students career in their curriculum seems to be more agreement with regard to the Commerce teachers followed by Science teachers compared to that of Arts teachers.

Conclusion: The present study was carried out to explore the opinion of the teaching faculty of Arts, Science, and Commerce discipline. The Commerce teachers are more positive opinion respectively regarding two aspects of Career Maturity, followed by Science teachers compared to that of Arts teachers. Hence Arts, Science and Commerce teachers has suggested that PG Curriculum should be work based skill development programs has to be incorporated into the curriculum, which provide students training on employability skills such as communication Skills, technical skills, analytical skills, team building, time & stress management skills, organizing skills with strong knowledge of core subjects. Effective re-design of curriculum is a powerful tool. Incorporating employability skills into higher education curricula is essential for preparing students for successful careers.

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EFFECTIVENESS OF BRAIN DOMINANCE STRATEGIES ON ATTITUDE TOWARDS MATHEMATICS AMONG UPGRADED SCHOOL STUDENTS

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Abstract

Education is basic right of all human beings & also a strong tool for National development. Education has contributed to develop the destinies of societies in all phases of country. The teacher performance is playing very vital role in education.

The researcher aims to determine the Effectiveness of Brain Dominance Strategies (BDS) on Attitude Towards Mathematics (ATM) of 8th grade students. The type of this research is a True experimental (Parallel design) study. The population of this study was the 8th grade students of Upgraded school in Davangere. The sample of this research consisted of two classes namely 8th -A grade as an experiment class and 8th - B as a control class. 33 students are Sample of this study. According to the observation of the brain dominance strategies, which include teaching and students activities are quite active. Based on the results of two tailed t-test for post-test data in experimental class was significant. Therefore, it can be concluded that the BDS effected on student's ATM.

Key Point: BDS- Brain Dominance Strategies, ATM- Attitude towards Mathematics

1.0: INTRODUCTION:

The Brain dominance has been considered as the cognitive feature of the students. Brain is the coordinating organ of the body. It decides the nature of responses to be delivered for the stimulus. Hence, the brain has been considered as the controlling part of the living being. Such a significant organ has to be reined and termed in such a way, so to bring the positive outcome from the learners. The students having the hemispherical dominance can overcome the learning difficulties, can also decide and practice the feasible learning styles. Brain Dominance helps the learners to gain essentialities in the learning sectors as well as reasoning abilities and adjustment behavior. The brain associated coping skills and psychological techniques will also make the learners acquire the skill to attain the Brain Dominance.

The Brain dominance is a principle which support that a brain is composed by parts, hemisphere or quadrants, not equals, but asymmetric and functionally specialised and where one part is dominant relatively to the others. The left side of the brain is responsible for controlling the right side of the body. It also performs tasks that have to do with logic, Such as in science and mathematics. On the other hands the right hemisphere coordinates the left side of the body, and performs tasks that have done with creativity and the arts.

The brain is complex and hard-working organ. It is made up of as many as hundred billion neurons or brain cells but only weights 3 pounds (1400-2000gm). It is an energy-intensive organ, making up around 2% of a person's weight but using a huge 20% of the body's energy.

2.0: THEORETICAL FRAMEWORK: -

Morris(2005) indicated that Ned Hermann who is the father of Brain dominance Technology drew on Sperry's work and developed the theory. He then went into develop a questionnaire. It is called as "Hermann Brain Dominance Instrument (HBDI)"By this model the brain is divided into 4 different systems and styles which are listed below.

A: Left cerebral hemisphere -Analytical

B: Left limbic system -Sequential

C: Right Limbic system -Interpersonal

D: Right Cerebral hemisphere -Imaginative

According to the notes of Morris (2005),"A related but independent theory is the theory of Multiple intelligences developed by Howard Gardner(1983).He identified seven types of intelligence. They are,

☐ Verbal- Linguistic

☐ Logical- Mathematical

☐ Visual- spatial

☐ Body – Kinaesthetic

☐ Auditory – Musical

☐ Inter-personal communication

☐ Intra-personal communication

Later he added two more they are,

i) Naturalist intelligence & ii) Existentialist intelligence

Rotter's (1954) social learning theory occurrence of reinforcement is contingent on his/her own behaviour factor of reinforcement. They are divided the factors as internal Brain Dominance and external Brain Dominance. According to him internal brain dominance perception of positive or negative event, take once own actions, one's own personal control, give personal efforts and decisions. External brain dominance is the individual's behaviour guided by fate, luck and other external circumstances.

3.0: RATIONALE OF THE STUDY:

By considering the above-mentioned issues, the present study examines teaching some Mathematics learning strategies among Upgraded School Students. Findings and implications will provide relatively new insights for teachers working in these settings. Most of the past studies described learners' use of strategies and did not relate to the effects of strategy training. The present study aims to find out the effects of Mathematics learning strategies training on hemisphericity. If it follows that strategy training does have positive effects on learners, which affirms that Mathematics learning strategies can be taught and learnt, the implication will be that it is worthwhile to put more emphasis on problem Solving in mathematics classroom.

To teachers, Mathematics was too vast a quantity for direct instruction. If learners can deploy strategies for independent mathematics learning both inside and outside classroom, their mathematics ability can increase. Teachers' role in facilitating left- and right-dominant hemisphere through introducing strategies will be ascertained. It will thus provide us with clearer directions of Mathematics instruction

in classroom context. It is believed that more skilful learning of mathematics through the use of learning strategies fuels the process of mathematics learning and learning outcomes.

And also, it is very helpful for Mathematics Teachers to know their students' neurological strengths and weaknesses to be able to reach the majority of their students and to shape their teaching methodology, techniques and materials accordingly. The findings of this study will provide an answer to which Mathematics learning strategies are preferably used by learners with different brain dominance types. It is expected to suggest ideas for brain-based instruction programs which have become increasingly popular in today's education.

The Indian classrooms are highly heterogeneous in nature. In the classroom, the students have different abilities. Some can master the subject quickly and some take more time to attain mastery. But the teacher tailors his instruction to the whole group without taking note of the heterogeneity of the group. As a result, the teaching may not be effective and fruitful. Neither the gifted children nor the slow learners have the benefit of the instruction of the teacher. Therefore, the teacher ought to plan his instruction more effective and meaningful satisfying the needs of all the types of the learners in the class. The entire learners in the class should be involved in the learning process. The brain dominance strategies cater to the needs of students having different mental abilities.

The National Policy on Education (1986) lays much emphasis regarding the application of modern approaches to instruction. At the same time, it also emphasizes the need for the value-based education. The cooperative learning approaches incorporate intellectual, social and psychological aspects of education.

In this context, such type of approaches must be employed to achieve the overall goals of education. The present study assumes significance in this context.

The present study contributes in the Following directions: (i) To the teachers, (ii) to the curriculum planers and (iii) to the students.

☐ **To the Teachers:** The outcome of the research brain dominance strategies on Mathematics Knowledge may be brought to the attention of the Mathematics teachers to enable them apply in their instructional or teaching activities. As a result, the teachers may understand the different Brain dominance strategies and employ relevant strategies in their instructional activities.

☐ **To the curriculum planers:** The outcomes of the present study help the curriculum planners and policy makers bring out the necessary changes in the educational curriculum so as to keep pace with scientific and technological development.

☐ **To the Students:** The outcomes of this study help the students employ the relevant brain dominance strategies on Mathematics Knowledge in their learning activities and thereby they can attain excellence not only in intellectual area but also in social and psychological spheres.

4.0: OBJECTIVE:-

1. To study the effectiveness of brain dominance strategies on Attitude towards Mathematics among upgraded school students.

5.0: HYPOTHESIS: -

1. There is no significant difference in pre-test mean score of attitude towards mathematics between control and experimental group.

2. There is no significant difference in post-test mean score of attitude towards mathematics between control and experimental group.

3. There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group.

4. There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group.

5. There is no significant difference in attitude towards mathematics between post-test & delayed post-test mean scores.

6.0: VARIABLES OF THE STUDY:-

The investigator selected the following variables for this study.

6.1: Dependant Variable:

Attitude towards Mathematics

6.2: Independent Variable:

☐ Teaching through Brain Dominance Strategies

☐ Conventional Method of teaching

7.0: RESEARCH METHODOLOGY: -

In the present study researcher adopted pre-test post-test experimental and control group design (parallel group) under true Experimental Method.

7.1: DESIGN OF THE STUDY:

	Pre-test	Treatment	Post-test	Delayed Post-test
Experimental Group	Attitude Towards Mathematics	Teaching through brain dominance Strategies	Attitude Towards Mathematics	Achievement in Mathematics
Control Group	Attitude Towards Mathematics	Teaching through Conventional Approach	Attitude Towards Mathematics	

8.0: Sampling:

In the present study, researcher adopted purposive sampling technique. Sample of the study consists of each 33 students for both control group and experimental group. They are studying in Anjum Higher Primary School in Davangere District.

There are 75 Students in 8th grade of Anjum higher primary School. Firstly Brain Dominance Scale (SLOT) was given for 75 students to identify dominancy level. Among them 66 students got left dominancy, 5 Students got Right dominancy, 4 Students got whole dominancy. For left dominancy 66 students, Raven's progressive matrices test (non-verbal) was given to group them into control & experimental group homogenously of 33 students in each group.

8.1: Brain Dominance Package:

Package consists of teaching and learning strategies. Teaching was done by using M3, Q2 Model prepared by the researcher after validating by the experts. Learners were actively participated in different activities and self prepared models.
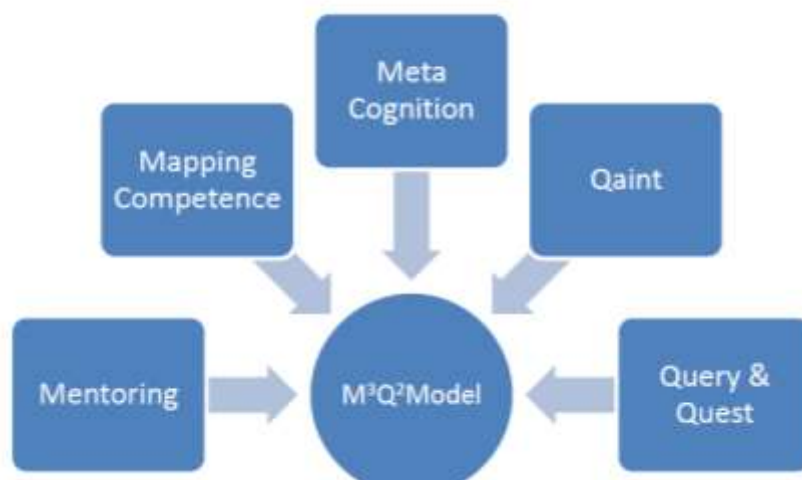
☐ Mentoring: - Advice to a learner.

☐ Mapping Competence: - Planning & Presenting Information in Visual mode.

☐ Meta Cognition: - Ability to reflect one's own thinking and learning.

☐ Quaint: - Attractive & Unique Methods, Charts etc.

☐ Query & Quest: - a question, an inquiry, doubt or act of reaching for something.

9.0: TOOLS FOR THE STUDY:

The following tool will be used for the present study.

Sl No.	Name of the tool	Developed By
1.	Brain Dominance Scale (SOLAT)	Developed by Venkataraman
2.	Brain Dominance strategies Package	Developed by Researcher. It involves teaching and learning Strategies.
3.	Attitude towards Mathematics	Developed by Researcher. The Questionnaire is built on five dimensions a) Interest in Mathematics Subject b) Mathematics Teaching & learning process c) Mathematics Anxiety d) Mathematics Classroom Environment & e) Mathematical Ability.

10.0: STATISTICAL ANALYSIS AND INTERPRETATION OF DATA

Hypothesis-1: There is no significant difference in pre-test mean score of attitudes towards Mathematics between control and experimental group.

Table 10.1: table presents mean scores, sample sizes (N), standard deviations, gain score, and t-value of pre-test score of attitudes towards Mathematics between control and experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t- value	Level of significance at 0.01 level
Pre-Test	**Experimental Group**	127.1818	33	16.95851	-0.87879	-0.186	Not-significant
	Control Group	128.0606	33	22.80480			

The table 10.1 reveals that, obtained t-value -0.186 is less than theoretical value 2.56. So, the obtained t-value is not significant at 0.01 level of significance. Hence accepted the null hypothesis and it is concluded that "There is no significant difference in pre-test mean score of Attitude towards Mathematics between control and experimental group". The mean of the both the groups are 127.1818 and 128.0606; SD is 16.95851 and 22.80480 respectively & gain Score is -0.87879. Hence the mean was almost same. Consequently, it is assured that both the groups were equivalent to each other before beginning of the experiment.

Hypothesis-2: There is no significant difference in the post-test mean scores of Attitude towards Mathematics between control and experimental group.

Table 10.2: table presents mean scores, sample sizes (N), standard deviations, gain score, and t-value of post-test score of attitudes towards Mathematics between control and experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	tvalue	Level of significance at 0.01 level
posttest	Experimental Group	145.3939	33	21.66786	13.78788	2.735	Significant
	Control Group	131.6061	33	20.59876			

The table 10.2 reveals that the obtained t-value 2.735 is greater than the theoretical value 2.56. at 0.01 level of significance. Hence, the null hypothesis is rejected and formulated alternative hypothesis that is, "There is a significant difference in the post-test mean score of Attitude towards Mathematics between control and experimental group". The mean scores of the both the groups are 145.3939 and 131.6061, SD are 21.66786 and 20.59876 respectively & gain Score is 13.78788. Therefore, Attitude towards Mathematics of Experimental Group is higher than Control group after giving treatment for Experimental group. Teaching through Brain Dominance Strategies is more effective on Attitude towards Mathematics compare with teaching through traditional method.
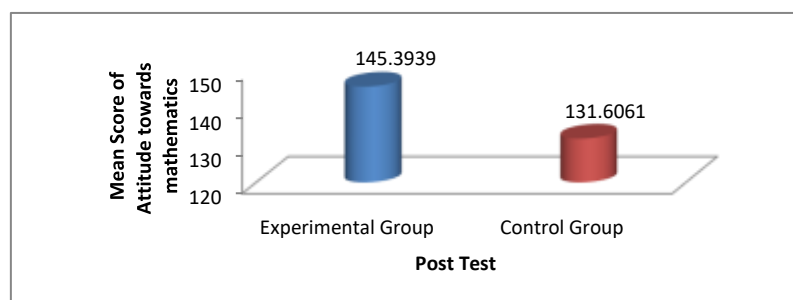
Graph 10.1: Post-test mean scores of Attitude towards Mathematics between control and experimental group.

Hypothesis-3: There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group.

Table 10.3: table presents mean scores, sample sizes (N), standard deviations, gain score, and t-value of pre-test & post-test score of attitudes towards Mathematics of control group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
Control Group	**Pre-Test**	128.0606	33	22.80480	-3.54545	-0.678	Not Significant
	Post-Test	131.6061	33	20.59876			

The table 10.3 reveals that, obtained t-value -0.678 is less than theoretical value 2.56. So, the obtained t-value is not significant at 0.01 level of significance. Hence accepted the null hypothesis and it is concluded that "There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group". The mean of the both the groups are 128.0606 and 131.6061, SD are 22.80480 and 20.59876 respectively & gain Score is -3.54545. Therefore, the mean was almost same. Consequently, it is assured that both the tests were equivalent to each other after traditional class.

Hypothesis-4: There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group.

Table 10.4: table presents mean scores, sample sizes (N), standard deviations, gain score, and t-value of pre-test & post-test score of attitudes towards Mathematics of Experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
Experimental group	**Pre-test**	127.1818	33	16.95851	-18.21212	-3.459	Significant
	Post-Test	145.3939	33	21.66786			

The table 10.4 reveals that the obtained t-value 3.459 is greater than the theoretical value 2.56. at 0.01 level of significance. Hence, the null hypothesis is rejected and formulated alternative hypothesis as "There is a significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group". The mean of the both the groups are 127.1818 and 145.3939, SD are 16.95851 and 21.66786 respectively & gain Score is 18.21212. Therefore, Attitude towards mathematics of Experimental Group is higher in post test after experimental treatment.
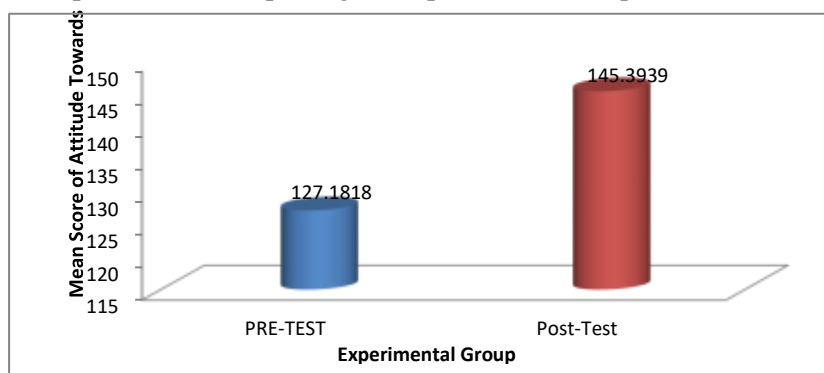
Graph 10.2: Attitude towards mathematics between pre-test & post-test mean scores of experimental group.

Hypothesis-5: There is no significant difference in attitude towards mathematics between post-test & delayed post-test mean scores.

Table 10.5: table presents mean scores, sample sizes (N), standard deviations, gain score, and t-value of post-test & delayed post-test score of attitudes towards Mathematics of Experimental group.

Attitude Towards Mathematics		Mean	N	Std. Deviation	Gain scores	t-value	Level of significance at 0.01 level
Experimental group	Post-Test	145.3939	33	21.66786	-4.09091	-2.742	Significant
	Delayed Post Test	149.4848	33	17.76253			

The table 10.5 reveals that the obtained t-value 2.742 is greater than the theoretical value 2.56. at 0.01 level of significance. Hence, the null hypothesis is rejected and formulated alternative hypothesis as "There is a significant difference in Attitude towards Mathematics between post-test & delayed post-test mean scores". The mean of the both the groups are 145.3939 and 149.4848, SD are 21.66786 and 17.76253 respectively & gain Score is 4.09091. Therefore, Attitude towards mathematics of Experimental Group is higher in delayed post test after experimental treatment using Brain Dominance Strategies. This shows that experimental treatment will help students to express their positive attitude towards Mathematics.
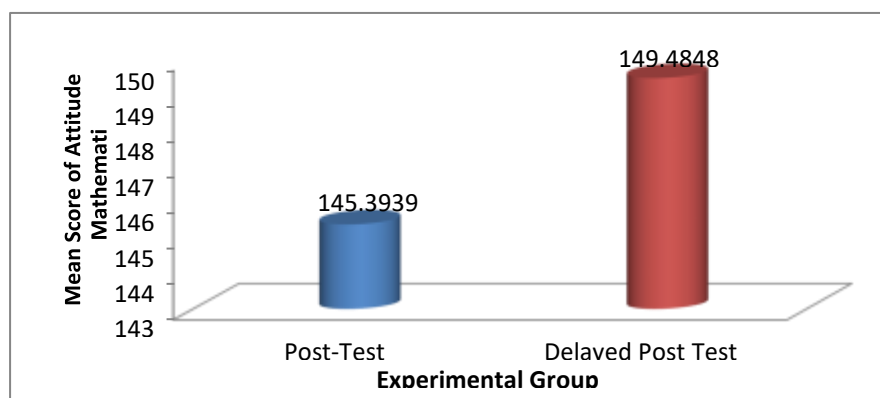
Graph 10.3: Attitude towards mathematics between post-test & delayed post-test mean scores.

11.0: MAJOR FINDINGS

1. There is no significant difference in pre-test mean score of attitude towards mathematics between control and experimental group. Mean scores between Control Group and Experimental Group in Pre Test are similar.

2. There is a significant difference in post-test mean score of attitude towards mathematics between control and experimental group. It means that, there exists a significant difference in the values of experimental group and Control group. From the mean values it is evident that, effectiveness of Control group values (Mean=131.6061) is lower than Experimental group (Mean=145.3939).

3. There is no significant difference in attitude towards mathematics between pre-test & post-test mean scores of control group. Mean scores between Pre and Post testof Control
   Group are similar.

4. There is a significant difference in attitude towards mathematics between pre-test & post-test mean scores of experimental group. The mean test Scores of Pre and Post test scores of Mathematics Attitude are Significant and found to be different. So there is a significant difference in the Mathematics Attitude of pre-test & post-test scores of experimental group. It means that, there exists a significant difference in the values of Pre test (**127.1818**) and Post test (**145.3939**) of Experimental group.

5. There is a significant difference in attitude towards mathematics between post-test & delayed post-test mean scores.. The mean test Scores of Experimental Post test and Delayed Post test are Significant and found to be different.

12.0: Conclusion & suggestion:

Based on the results of the research and discussion as well as conclusions, the authors would like to give suggestions to carry out further research to students at different levels of education units, and by taking a larger sample. Thus, these Strategies is expected to be used as one of the important indicators in the preparation of the curriculum, especially in Mathematics lessons that are even better in the future. This study shows that there is a significant effect of

Brain Dominance Strategies on Student's Attitude towards Mathematics among 8th grade students of Davangere District.

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DEVELOPMENT AND IMPACT OF SYNECTICS MODEL LEARNING ON ACADEMIC ACHIEVEMENT AND PROBLEM SOLVING ABILITY AT SECONDARY LEVEL

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Introduction:

The Synectics learning paradigm identifies 21st-century learning as a result of the 4.0 industrial revolution. Enhancing the quality of education is essential to address this demand. One way to improve the quality of education is by shifting the learning paradigm, especially in science classes, from Teacher Centered Learning to Student Centered Learning (Nichols, 2017) Students may be allowed to freely explore their abilities to the thinking skills management through the use of the Synectics learning models. Students can generate ideas and solutions to solve problem in both academic and everyday situations. The Synectics learning model uses analogies and metaphors to help students develop higher-order thinking skills.(Priansa et.al ,2017)

The Synectics learning methodology enhances metaphorical thinking, problem-solving ability, and mastery of learning materials. (Huda, 2019) Procrastination leads to shallow thinking when compelled to solve problems immediately. Allowing the mind to produce ideas and solutions is essential for meaningful thinking. Object autonomy allows humans to think imaginatively about problem-solving skills through the application of synectics model (Tajari and Tajari, 2011) Synectics learning models can improve met cognitive abilities and problem-solving abilities. (Suhana, 2019) The Synectics paradigm is used in secondary and higher education to enhance creativity and problem-solving abilities. (Diluzio and Congdon, 2015) Synectics learning process enhances pupils' creative thinking skills.

According to the Synectics model, creativity emerges from the innovative use of existing information to create unique and useful products. Restructuring, or interpreting a problem in a novel way, and incubation provide further foundations for the development of creativity.(Djudin ,2017) Synectics creative thinking approach teaches divergent thinking abilities, enabling individuals to assimilate and correlate ideas with new solutions to problems.(Hargrove and Nietfeld ,2015) The Synectics teaching method is a novel teaching method that promotes students' thinking and problem-solving capacities, as well as creative expression of new ideas. (Amir &Moktahab, 2011) When compared to traditional teaching , Synectics models in the fields of science most effectively enhance one's ability to solve problems.(Saleh ,2020). In the application of the Synectic learning model can make science material easier to understand the concepts (Manurung, 2017).These materials incorporated the usage of synectics approaches, which is known as one of the creativity strategies commonly used for solving problems. Method. (Chadrasekaran, 2014)

Synectics model helps learners to create new ideas or novel ideas. Synectics model make higher order thinking for students.(Priansa,2017)Synectics model helps in develops divergent thinking abilities that allows students to internalize their ideas and associate them with new ideas for problem

solving. (Hargrove, 2015) Synectics model help out in develop creativity in drawing illustration skill for learners.(Syabani ,2020) It helping hand for pupils to become student-centered active learning.(Kalantarnia, 2020) The Synectics method encourages children's imagination.(Dababneh,2015) It helps to develop imaginative thinking for students (Mutmainnah ,2017). Synectics model enables students to become learner-centered through the thinking process.(Tajari,2010) It enhances emotional, cognitive, and psychomotor the practice of problem-solving ability (Ceberio, Almudí, & Franco, 2016).

Phrases of synectics model:
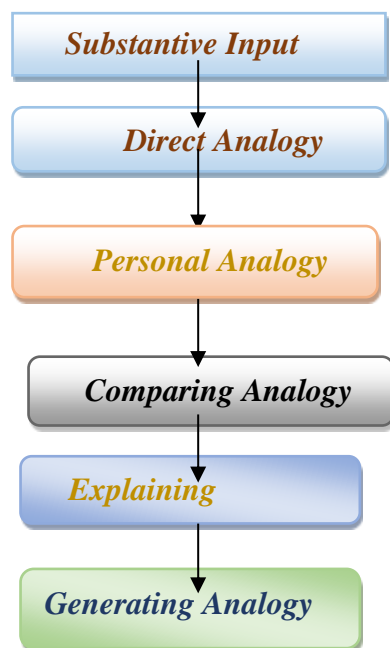
Fig 1: Phrases of synectics Model

Study found that Synectics Model was shown to be much higher than the group taught using the conventional style of teaching. (Chahal Gagnita, 2021) The recent study revealed that Synectics Model of Teaching emerged to be significantly superior to the Traditional Method of Teaching for enhancing student achievement.(Rubi Mian ,2024) In the same way the other study conducted by Synectics teaching model made a significant contribution to the high academic achievement of the students. The use of this model in the classroom improves the understanding of geometry concepts. (Aftab Ahmad Khan and Nasir Mahmood, 2017)Study found that synectics Approach has been shown to be useful in developing pupils' problem-solving skills. This model can be utilized successfully to build problem-solving skills, which is highly important for pupils. (Sheela, 2004) The study found that using the synectics model improves problem-solving, ability among trainee teachers. (Rajput and Archana ,2018)

Objectives of the study:
1. To design the synectics model learning material among ninth standard students.
2. To find out whether there is any significant difference between the post-test mean scores of the experimental group taught through the synectics model learning material with reference to the selected variables.
3. To find out the significant effect of the synectics model learning material of IX standard students in science

Hypotheses of the study:
1. There is no significant difference between the control and experimental group students in the pre-test mean scores with reference to the following variable
i)Academic Achievement in science ii) Problem solving ability
2. There is no significant difference between the control and experimental group students in the post-test mean scores with reference to the following variable
i)Academic Achievement in science ii) Problem solving ability
3. There is no significant effect interaction between problem solving ability and academic achievement in science.

Material and methods:
The study was quantitative and employed Quasi –experimental randomized pretest – Posttest control group design Through purposive sampling technique 60 samples were chosen. These samples were categorized into the experimental and control groups of ninth-grade students at Wardlaw High School in Ballari City. The instrument used for data collection were Science academic achievement test (SAT) and problem solving ability in science standardized by the investigator. A data analysis was done with paired sample t-test and ANOVA.

Variable of the study:
Independent variable: Synectics model learning material and conventional method
Dependent variable: Science academic achievement (SAT) and Problem solving ability
Results:

H_1:There exists significant difference between control and experimental group through the synectics model learning material with reference to

i) Achievement test in science ii) problem solving ability

Table1: Comparisons between Achievement and problem solving ability test of both CG and EG through SMLM

Variable	Test	N	Mean	SD	df	t-value	p-value	Hypothesis Supported
Achievement test	Pre- test	60	11.98			22.036	.000	
	Post test	60	16.70	2.274	59			Yes
				2.606				
Problem solving ability	Pre- test	60	12.33			21.193	.000	
	Post –test	60	17.13	2.199	59			
				2.466				

Bar graph 1: Comparisons between Achievement and problem solving ability test of both CG and EG through SMLM
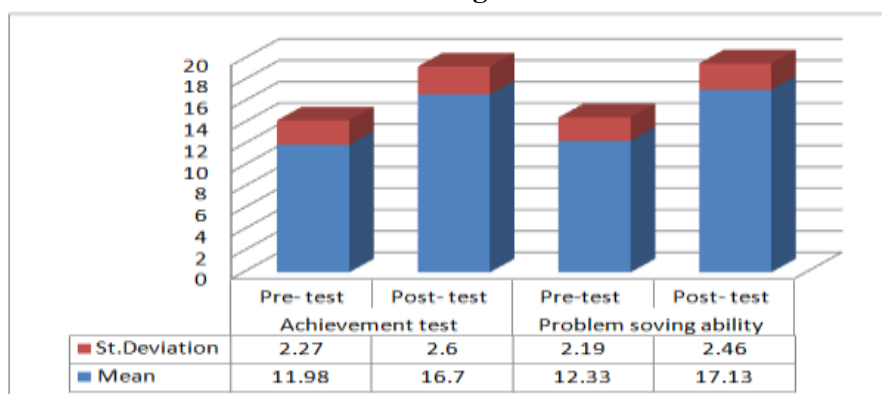
The above table 1 Bar graph 1 indicates t- value is   22.036 and 21.193 of achievement and problem solving ability test. pre test M and SD is 11.98 and 2.27 post test M and SD is 16.7 and 2.6 of achievement test . Pre test M and SD 12.33 and 2.19 post test M and SD is 17.13 and 2.46 of problem solving ability Here p-value is (p<.05) .05 level of significance. As a result hypothesis is rejected at the significance level of .05 .It means that there is a significant difference between student pre and post test means scores in academic achievement and problem solving ability.

H_2: There is no significant difference between the control and experimental group students in the pre-test mean scores with reference to the following variable

i)Academic Achievement in science ii) Problem solving ability

Table2: Comparisons between Achievement and problem solving ability pre-test of both CG and EG through SMLM

Groups	Variable	Test	N	Mean	SD	df	t-value	p-value	Hypothesis Supported
Control Group	Achievement test	Pre-test	30	11.73	2.24	29	0.82	0.41	
Experimental Group		Pre-test	30	12.23	2.31				No
Control Group	Problem solving ability	Pre-test	30	12.06	2.06	29	0.90	0.37	
Experimental Group		Pre-test	30	12.60	2.32				

Bar graph 2:Comparisons between Achievement and problem solving ability pre-test of both CG and EG through SMLM
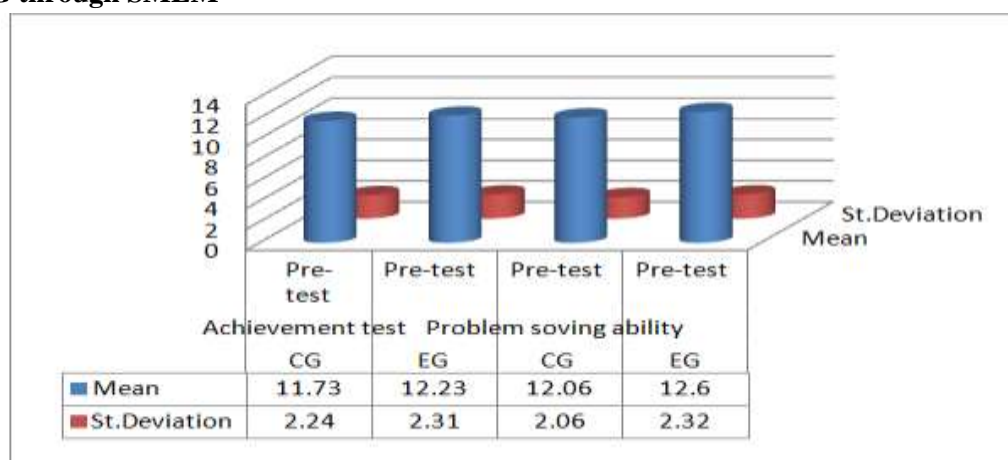
The above table 2 Bar graph2 indicates t- value is 0.82 and 0.90 of both CG and EG in achievement test and problem solving ability. pre -test CG achievement test M and SD is 11.73 and 2.24 . Pre-test EG achievement test M and SD is 12.23 and 2.31. pre -test CG Problem solving M and SD is 12.06 and 2.06 pre-test EG problem solving ability M and SD is 12.6 and 2.32 . Here p –value is (P>.05) .05 level of significance .It means that there is no significant difference between pre test mean scores of Both CG an EG in both achievement and problem solving ability test among students.

H$_3$: There is no significant difference between the control and experimental group students in the post-test mean scores with reference to the following variable.

i)Academic Achievement in science ii) Problem solving ability

Table3: Comparisons between Achievement and problem solving ability post-test of both CG and EG through SMLM

Groups	Variable	Test	N	Mean	SD	df	t-value	p-value	Hypothesis Supported
Control Group	**Achievement test**	**Post-test**	30	15.26	2.31	29	**5.08**	**.000**	
Experimental Group		**Post-test**	30	18.13	2.04				**Yes**
Control Group	**Problem solving ability**	**Post-test**	30	15.53	1.79	29	**7.13**	**.000**	
Experimental Group		**Post-test**	30	18.73	1.96				

Bargraph 3: Comparison between Achievement and problem solving ability post-test of both CG and EG through SMLM
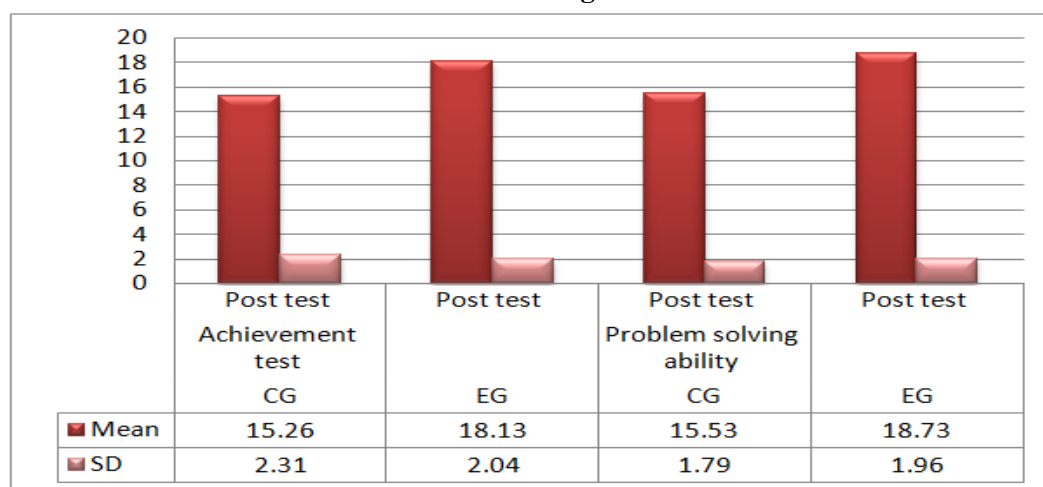
The above table 3 Bar graph 3 indicates t- value is 5.08 and 7.13 of both CG and EG in achievement test and problem solving ability. Post-test CG achievement test M and SD is 15.26 and 2.31. Post-test EG achievement test M and SD is 18.13 and 2.04 post test CG Problem solving M and SD is 15.53 and 1.79 post -test EG problem solving ability M and SD is 18.73 and 1.96 Here p –value is (P<.05) .05 level of significance .It means that there is a significant difference between post test mean scores of Both CG an EG in both achievement and problem solving ability test among students. In science this is taught using synectics model learning material. EG students performed excel through SMLM than the CG students.

H₄: There is no significant interaction effect between problem solving ability and academic achievement in science.

Table 4: Significant effect between achievement test and problem solving ability through SMLM with between and within groups

Group	Variables	Sum of squares	df	Mean square	F	p-value	Hypothesis Supported
Between Groups	Achievement test	123.26	1	123.267	25.77		
Within Groups		277.33	58	4.782		.000	Yes
Between Groups	Problem solving ability	153.600	1	153.600	43.38		
Within Groups		205.33	58	3.54			
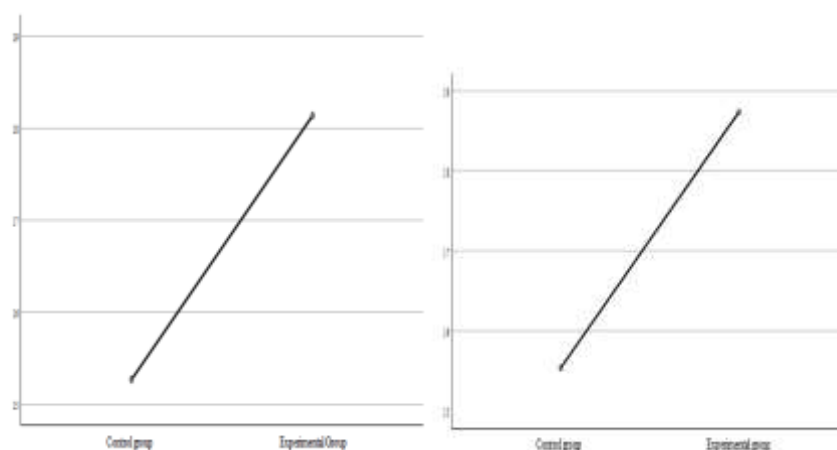
Graph 4: mean scores of academic achievement of post -test   Graph 5: Mean scores of problem solving ability of post-test

The above table 4 and graph 4 and 5 indicates that main effect of students performance can be observed from the obtained f- value is 25.77 and 43.38 of both academic achievement and problem solving ability. p- Value is 0.000 is lesser then the significant level. It means the above stated null hypothesis can be rejected   and we restate as there is a significant effect between academic achievement and problem solving ability

Discussion:

The recent study revealed that Synectics Model of Teaching emerged to be significantly superior to the Traditional Method of Teaching for enhancing student achievement. Rubi Mian ,2024 and Study found that synectics Approach has been shown to be useful in developing pupils' problem-solving skills. This model can be utilized successfully to build problem-solving skills, which is highly important for pupils. Sheela, 2004 finding of the study reveals that there is a significant difference between post test mean scores of Both CG an EG in both achievement and problem solving ability test among students. In science this is taught using synectics model learning material. EG students performed excel through SMLM than the CG students.

Conclusion:

Students can generate ideas and solutions to solve problem in academic through synectics model. Uses analogies and metaphors to help students develop higher-order thinking skills with the help of synectics learning model Priansa et.al, 2017 It Allowing the mind to produce ideas and solutions for problem. Object autonomy allows humans to think imaginatively about problem-solving skills through the application of synectics model Tajari and Tajari, 2011Synectics model help out in develop creativity in drawing illustration skill for learners.Syabani ,2020 It helping hand for pupils to become student-centered active learning. Kalantarnia, 2020

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REFLECTIVE PATHWAYS: ENHANCING SELF-EFFICACY AND TEACHER IDENTITY THROUGH SELF-REFLECTION IN B.ED. PROGRAMS

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Abstract

This study explores the role of self-reflection in enhancing self-efficacy and shaping teacher identity among Bachelor of Education (B.Ed.) students. Through qualitative methods, including interviews and reflective journals, the research examines how structured self-reflection practices impact future educators' confidence and sense of professional identity. Findings suggest that regular engagement in self-reflection not only fosters greater self-awareness but also empowers students to navigate challenges and uncertainties in their teaching journey. The implications for B.Ed. programs highlight the necessity of integrating self-reflection as a core component of teacher education curricula, ultimately supporting the development of competent and resilient educators.

Keywords ; Self-Reflection, Self-Efficacy, Teacher Identity, Teacher Education Reflective Practice

Introduction

The professional growth of teachers involves more than just the mastery of subject content and pedagogical strategies—it requires the development of strong self-efficacy and a well-defined teacher identity. These two aspects are crucial for pre-service teachers, particularly those undergoing training in Bachelor of Education (B.Ed.) programs, as they prepare to take on the responsibilities of classroom teaching. Self-efficacy, as conceptualized by Bandura (1977), refers to an individual's belief in their capability to execute actions required to manage prospective situations effectively. In teaching, this manifests in a teacher's confidence to foster learning, manage diverse classroom dynamics, and overcome challenges. Equally important is the formation of a teacher identity, which involves the internalization of professional roles, values, and beliefs that guide teaching practices.

One of the most powerful tools available to pre-service teachers for enhancing both self-efficacy and teacher identity is self-reflection. Reflective practice, rooted in Schön's (1983) concept of the "reflective practitioner," encourages educators to critically analyze their teaching experiences, challenges, and successes to improve their professional competence and develop a deeper understanding of their role as educators. In B.Ed. programs, fostering reflective pathways through structured reflection not only enables pre-service teachers to connect theory with practice but also helps them in building a sense of professional identity and belief in their teaching capabilities.

This thematic paper explores how self-reflection within B.Ed. programs serves as a critical pathway for enhancing self-efficacy and shaping teacher identity. It examines the theoretical underpinnings of reflective practice, the role of reflection in teacher training, and the practical ways in which self-reflective strategies can be incorporated into B.Ed. curricula. Through this exploration, the paper highlights the significance of reflection in shaping confident, self-assured, and professionally grounded educators who are equipped to navigate the complexities of modern classrooms.

By examining both the psychological and pedagogical impacts of reflective practices, this paper argues that B.Ed. programs must prioritize self-reflection as a central component of teacher education. Doing so ensures that pre-service teachers are not only well-prepared to handle classroom challenges but also capable of continuous personal and professional growth throughout their teaching careers.

1. Theoretical Framework

The foundation of this paper rests on two key theoretical constructs: **self-efficacy** and **teacher identity**, both of which are significantly enhanced through **self-reflection**. These concepts are critical to the professional development of pre-service teachers in Bachelor of Education (B.Ed.) programs. By engaging in reflective practices, pre-service teachers can develop the confidence and clarity needed to perform effectively in their future roles.

1. Self-Efficacy in Teaching

The concept of **self-efficacy** was first introduced by Albert Bandura (1977) within his social cognitive theory, where it is defined as an individual's belief in their capability to accomplish tasks and influence events that affect their lives. In the context of teaching, self-efficacy refers to a teacher's belief in their ability to successfully manage a classroom, engage students, and foster learning outcomes. Bandura's theory highlights four sources of self-efficacy that are particularly relevant to pre-service teachers:

1. **Mastery Experiences**: Direct experiences of success in teaching tasks boost self-efficacy, while failure can diminish it. Reflection allows teachers to evaluate these experiences and learn from them, reinforcing their confidence and skills.

2. **Vicarious Experiences**: Observing peers or mentors perform successfully can enhance the self-efficacy of pre-service teachers. Reflecting on these observations helps them internalize successful teaching practices.

3. **Verbal Persuasion**: Encouragement and constructive feedback from mentors, peers, and supervisors can strengthen a teacher's belief in their capabilities. Reflective dialogue in B.Ed. programs provides opportunities for this kind of feedback.

4. **Emotional and Physiological States**: Teachers' emotions, stress levels, and moods can impact their self-efficacy. Reflection helps pre-service teachers identify emotional patterns and develop coping strategies to manage stress in the classroom.

Through **self-reflection**, pre-service teachers have the opportunity to process their experiences, identify strengths, address weaknesses, and build resilience, all of which contribute to enhanced self-efficacy. Reflective practices such as journaling, peer discussions, and mentor feedback are essential in helping teachers recognize their progress and take ownership of their professional development.

2. Teacher Identity Formation

Teacher identity refers to the evolving sense of self that teachers develop through their experiences in the profession. It encompasses personal beliefs, values, and understandings about teaching, learning, and the role of the teacher in society. Lasky (2005) describes teacher identity as a dynamic, socially constructed phenomenon influenced by interactions with students, colleagues, and the broader educational environment.

For pre-service teachers, the formation of a professional identity is crucial as they transition from being students of teaching to becoming teachers themselves. This process involves reflection on their

experiences, values, and goals, as well as alignment with the professional standards and expectations of the teaching profession. **Reflective practice** plays a vital role in this identity formation by enabling pre-service teachers to:

- **Clarify personal beliefs and values**: Reflection helps pre-service teachers articulate their core beliefs about education and how these beliefs align with their professional practice.
- **Navigate role expectations**: Pre-service teachers often experience tensions between their personal and professional selves. Reflective practices allow them to negotiate these tensions and develop a coherent teacher identity.
- **Build professional agency**: By reflecting on their experiences, teachers can take ownership of their professional growth and make informed decisions about their teaching practices, ultimately building a strong sense of agency.

Developing a **teacher identity** is not a linear process, but one that involves continuous reflection, adaptation, and growth. Pre-service teachers benefit from opportunities to reflect on their teaching philosophy, their interactions with students, and their responses to classroom challenges. These reflective experiences enable them to construct a professional identity that is resilient, adaptable, and aligned with their personal values.

3. Reflective Practice as a Bridge

Reflective practice, as introduced by Donald Schön (1983), is central to the process of professional growth in teaching. Schön's notion of the "reflective practitioner" emphasizes the importance of ongoing self-reflection in bridging the gap between theory and practice. For pre-service teachers, this reflective pathway enables them to:

- **Connect theoretical knowledge to practical experience**: Reflection helps teachers make sense of their classroom experiences in light of the pedagogical theories they have learned during their training.
- **Engage in critical thinking**: By reflecting on their teaching practices, pre-service teachers develop the ability to critically evaluate their instructional methods and make informed changes to improve student learning.
- **Foster lifelong learning**: Reflective practice encourages teachers to view their professional development as a continuous journey, fostering a mindset of lifelong learning and improvement.

B.Ed. programs that emphasize structured reflective activities, such as reflective journals, peer feedback sessions, and mentor-guided reflections, provide pre-service teachers with the tools they need to enhance their self-efficacy and construct a professional teacher identity. Reflective practice becomes the bridge that links their personal beliefs, professional goals, and practical experiences, fostering both self-confidence and a sense of belonging in the teaching profession.

2. The Role of Self-Reflection in Enhancing Self-Efficacy

Self-efficacy, the belief in one's ability to successfully perform tasks and manage situations, is a fundamental component in the professional development of pre-service teachers. A teacher's level of self-efficacy significantly influences their classroom management, instructional decisions, and persistence in overcoming challenges. In Bachelor of Education (B.Ed.) programs, self-reflection serves

as a critical tool for enhancing self-efficacy by allowing pre-service teachers to assess and improve their teaching practices, confront obstacles, and build confidence in their abilities.

1. Reflection as a Confidence-Building Tool

Self-reflection allows pre-service teachers to critically evaluate their teaching experiences, helping them identify successes, areas for improvement, and potential growth. This process enables them to become more aware of their strengths and the impact of their teaching on students. When teachers reflect on positive experiences, such as successfully managing a classroom or facilitating student learning, it reinforces their belief in their teaching abilities. This confidence is essential for developing self-efficacy, as it motivates teachers to take on new challenges, experiment with innovative methods, and adapt to diverse classroom environments.

For example, after teaching a lesson, a pre-service teacher might reflect on how well the students engaged with the content and whether learning objectives were met. By identifying specific teaching strategies that worked well, the teacher can build confidence in those methods, which in turn strengthens their sense of competence and self-efficacy.

2. Learning from Mistakes and Challenges

Reflection not only helps pre-service teachers celebrate successes but also provides an opportunity to learn from mistakes and challenges. Teaching is inherently complex, and even experienced teachers encounter difficulties in areas such as classroom management, student engagement, and curriculum delivery. For pre-service teachers, facing these challenges can be daunting and may lead to self-doubt. Through self-reflection, teachers can examine their responses to difficult situations and seek solutions for improvement. For example, if a lesson didn't go as planned due to poor classroom management, reflection helps the teacher identify what went wrong—perhaps they didn't establish clear expectations or provide enough structure. By reflecting on these experiences, pre-service teachers can develop strategies for improvement, which enhances their problem-solving skills and boosts their self-efficacy. This reflective process is essential for transforming mistakes into valuable learning experiences. As pre-service teachers learn to manage difficulties with reflective practice, they develop resilience and adaptability—key components of strong self-efficacy.

3. The Role of Reflective Tools in B.Ed. Programs

Incorporating reflective tools in B.Ed. programs is crucial for systematically fostering self-efficacy among pre-service teachers. Common reflective tools include:

- **Reflective Journals**: Writing reflective journals allows teachers to document and analyze their teaching experiences over time. By keeping a record of their thoughts, challenges, and progress, pre-service teachers can track their development and become more aware of how their skills are evolving. This reflective practice reinforces their self-efficacy by showcasing concrete examples of growth and success.

- **Mentor and Peer Feedback**: Engaging in reflective dialogue with mentors and peers helps pre-service teachers receive constructive feedback on their performance. Mentors provide insights that guide reflective thinking and offer support when teachers are facing challenges. Peer reflections encourage collaborative learning, where teachers can share experiences and strategies, reinforcing self-efficacy through collective problem-solving.

- **Video Reflection**: Video recording lessons for self-evaluation is another powerful reflective tool. Watching oneself teach enables pre-service teachers to observe their body language, tone, student interactions, and instructional methods, offering an objective lens to assess their teaching. This method provides concrete evidence of areas for improvement and progress, which can reinforce confidence and self-efficacy.

4. Reflecting on Mastery Experiences

Bandura's theory of self-efficacy emphasizes the importance of **mastery experiences**, or direct success in performing a task, as the most powerful source of self-efficacy. Self-reflection amplifies the impact of mastery experiences by prompting pre-service teachers to consciously acknowledge their successes and understand why they were successful. By analyzing these experiences through reflective practices, teachers internalize their achievements, which strengthens their confidence and motivates them to tackle more challenging tasks.

For instance, after successfully delivering a lesson that engaged all students and met learning goals, a pre-service teacher can reflect on how well they prepared, organized materials, and responded to student needs. This reflection reinforces the belief that with careful planning and execution, they can consistently achieve positive outcomes in their teaching.

5. Addressing Emotional and Physiological States

Self-efficacy is also influenced by emotional and physiological states, such as stress, anxiety, and exhaustion. Teachers who experience high levels of anxiety may struggle to maintain a belief in their competence, especially when faced with demanding classroom situations. Self-reflection can help pre-service teachers recognize the emotional patterns that may be hindering their performance.

By reflecting on their emotional responses to teaching challenges, pre-service teachers can develop strategies to manage stress and improve their emotional resilience. Techniques such as mindfulness, time management, and relaxation exercises can be incorporated into their reflective practice to maintain a positive mindset, which contributes to stronger self-efficacy.

3. Building Teacher Identity Through Reflective Practice

The development of a strong teacher identity is crucial in pre-service teacher education. Teacher identity refers to how educators perceive themselves in relation to their roles, beliefs, and values in teaching. Reflective practice is central to this process, enabling teachers to critically assess their beliefs, align them with professional realities, and refine their teaching approach.

1.Understanding Teacher Identity

Teacher identity evolves continuously, shaped by personal beliefs, professional roles, emotional engagement, and societal expectations. Through reflection, pre-service teachers explore their evolving identity and gain clarity on who they are as educators.

2.Aligning Personal Beliefs with Professional Practice

Reflective practice helps teachers align personal values with the practical demands of the profession. It bridges the gap between theoretical knowledge and real-world teaching, allowing teachers to develop a teaching philosophy grounded in both theory and practice. Reflection also aids in navigating conflicting role expectations, fostering an authentic and resilient teacher identity.

3.Emotional Engagement and Teacher Identity

Teaching involves significant emotional engagement. Reflective practice helps teachers understand how emotions influence their teaching and decision-making. By processing emotional responses to classroom challenges, teachers build emotional resilience, which strengthens their professional identity.

4.Reflective Tools in Identity Formation

Reflective journals, collaborative reflection, and portfolio development are key tools in fostering teacher identity. Journals track evolving beliefs and practices, collaborative reflection encourages shared learning, and portfolios allow teachers to curate their growth, aligning professional goals with their evolving identity.

5.Case Studies in Teacher Identity Development

Research shows that pre-service teachers who engage in reflective practice develop stronger teacher identities. For instance, a teacher struggling with classroom management may, through reflection and feedback, develop self-awareness, leading to a confident and student-centered teaching identity.

4. Proposed Reflective Practices in B.Ed. Programs

To foster self-efficacy and teacher identity, B.Ed. programs must incorporate structured reflective practices that encourage deep personal and professional reflection. Below are key reflective practices that can be integrated into B.Ed. programs:

1.Reflective Journals

Pre-service teachers should be encouraged to maintain daily or weekly reflective journals. These journals serve as a personal space for documenting classroom experiences, challenges, successes, and emotional responses. Reflecting on these aspects regularly helps teachers track their growth, recognize patterns, and refine their teaching philosophy.

2.Peer Observation and Feedback

Collaborative reflection with peers allows teachers to observe each other's teaching and engage in constructive feedback. This practice promotes shared learning and encourages teachers to reflect on different teaching strategies, classroom management techniques, and student engagement practices.

3.Mentorship and Reflective Dialogue

Mentorship programs should include regular reflective dialogue between mentors and pre-service teachers. This practice allows pre-service teachers to gain insights from experienced educators, engage in guided reflection, and develop a deeper understanding of their teaching identity. Mentors can help them navigate challenges and align personal beliefs with professional expectations.

4.Video Reflection

Recording classroom sessions and reviewing them provides pre-service teachers with an opportunity to reflect on their teaching behaviors, student interactions, and instructional methods. Video reflection enables teachers to observe their strengths and identify areas for improvement, fostering self-awareness and growth.

5.Portfolio Development

Creating a teaching portfolio is an ongoing reflective practice where pre-service teachers compile lesson plans, student feedback, and self-reflections on teaching experiences. Portfolios serve as a tangible representation of their professional journey, offering an opportunity to reflect on progress, achievements, and future goals.

6.Case Study Reflection

Pre-service teachers can engage in case study reflections, where they analyze real or hypothetical classroom situations. By reflecting on these scenarios, teachers develop problem-solving skills, learn to apply theoretical knowledge, and critically assess how they would handle similar situations in practice.

7.Action Research Projects

Engaging in action research projects allows pre-service teachers to investigate a particular issue in their teaching practice, implement changes, and reflect on the outcomes. This practice fosters a research-based approach to reflection, encouraging continuous improvement and professional development.

8.Group Reflection Circles

Reflection circles are group discussions where pre-service teachers share experiences and reflections on specific teaching practices or challenges. These collaborative sessions encourage community building, diverse perspectives, and a sense of collective learning, while promoting deeper reflection on personal teaching styles and classroom dynamics.

Conclusion

Reflective practice is an indispensable component of pre-service teacher education, particularly in B.Ed. programs. It plays a central role in enhancing both self-efficacy and teacher identity, which are vital for professional growth and effective teaching. By engaging in structured reflective practices, pre-service teachers develop the confidence, adaptability, and professional self-awareness needed to navigate the complexities of modern classrooms.

Through reflective tools such as journals, peer feedback, video analysis, and mentorship, teachers gain deeper insights into their teaching practices and personal beliefs. This self-reflection allows them to bridge the gap between theory and practice, align their personal values with professional expectations, and continuously improve their skills. The integration of reflection-based strategies into B.Ed. curricula provides a critical pathway for developing competent, self-assured educators who can confidently address the challenges of the teaching profession.

Ultimately, prioritizing self-reflection in teacher training programs ensures that pre-service teachers are not only equipped with the necessary pedagogical skills but are also empowered to grow both personally and professionally. This holistic development fosters lifelong learning, resilience, and a strong sense of professional identity, enabling teachers to contribute meaningfully to the education system and positively impact the lives of their students.

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DIGITAL LITERACY FOR TEACHER EDUCATORS

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Introduction

In the rapidly evolving digital era, education systems worldwide are transforming. Digital literacy, which refers to effectively using digital technologies to access, manage, evaluate, and create information, has become essential for educators. **Teacher educators** responsible for training future teachers play a crucial role in integrating digital competencies into the teaching-learning process. Developing digital literacy among teacher educators is not only about enhancing their technological skills but also about preparing them to mentor future teachers using digital tools to enrich student learning.

Defining Digital Literacy

Digital literacy, in its broadest sense, extends beyond basic computer skills. It involves critical thinking, the ability to evaluate online sources, data management, digital communication, and a deeper understanding of digital citizenship, including ethical use of technology. For teacher educators, this includes knowledge of educational technologies (EdTech), online pedagogies, and the ability to incorporate these tools in teacher training programs.

According to **Gilster** (1997), digital literacy is "the ability to understand and use information in multiple formats from a wide range of sources when it is presented via computers." As digital tools increasingly shape the educational landscape, teacher educators must be proficient in both utilizing and imparting this competency.

Importance of Digital Literacy for Teacher Educators

1. Enhanced Pedagogical Approaches

Teacher educators need to be digitally literate to integrate technology into pedagogical strategies effectively. The use of digital tools such as **Learning Management Systems (LMS)**, **virtual classrooms**, and **interactive content** allows educators to adopt blended learning approaches, facilitating both traditional and technology-enhanced teaching. Research by **Koehler & Mishra** (2009) emphasizes the importance of the TPACK framework (Technological Pedagogical Content Knowledge), which integrates technology into pedagogy and content to improve teaching efficacy.

2. Fostering Digital Literacy in Future Teachers

Teacher educators set the benchmark for future educators. If teacher educators are digitally competent, they are more likely to foster a culture of digital literacy among pre-service teachers. This ripple effect ensures that future generations of students are also well-prepared for a digitalized world. A study by **Fullan & Langworthy** (2014) pointed out that developing "new pedagogies" involving deep learning with digital tools requires educators to have substantial digital literacy themselves.

3. Supporting Lifelong Learning

The digital age has transformed education into a lifelong process. Teacher educators, through digital literacy, must be prepared to encourage lifelong learning in their students. This is particularly important as technological advancements continue to redefine professions. According to **Selwyn** (2011), digital literacy enhances an educator's ability to adapt to new teaching methodologies, thereby supporting continuous professional development.

4. Engaging with Diverse Learners

Digital technologies enable teacher educators to engage with a diverse group of learners more effectively. Tools such as **virtual reality** (VR) simulations, interactive e-books, and online collaboration platforms help accommodate different learning styles and needs, particularly for students with disabilities or from varied cultural backgrounds. A study by **Beetham & Sharpe** (2013) highlights that digital literacy empowers educators to provide differentiated instruction.

Challenges in Digital Literacy for Teacher Educators

1. Lack of Infrastructure and Resources

A major challenge for teacher educators, especially in developing countries, is limited access to digital tools and reliable internet connectivity. Even when teacher educators are willing to integrate digital tools, lack of infrastructure can be a significant barrier. **Kapur** (2019) identified that inadequate digital infrastructure in many educational institutions limits the development of digital skills among teacher educators.

2. Resistance to Change

Digital literacy requires not just technological skills but also a shift in mindset towards adopting new teaching practices. Some teacher educators may resist these changes due to a preference for traditional teaching methods. **Ertmer** (2005) identified "second-order barriers," such as belief systems and attitudes, which hinder the adoption of technology by educators.

3. Inadequate Professional Development

Many teacher educators lack access to continuous professional development (CPD) programs focused on enhancing digital skills. A **UNESCO** (2020) report emphasized that digital literacy training for educators often focuses on basic skills, rather than fostering critical digital competencies such as evaluating digital content, using data analytics, or integrating advanced educational technologies like artificial intelligence (AI).

Strategies for Enhancing Digital Literacy in Teacher Educators

1. Incorporating Digital Literacy into Curriculum

Institutions responsible for teacher education must embed digital literacy into the curriculum, focusing not only on technological tools but also on how to integrate them meaningfully into pedagogical practices. According to **Hughes et al.** (2018), developing a comprehensive digital literacy framework in teacher education programs ensures that educators are not only users but also critical analysts and creators of digital content.

2. Professional Development and Mentorship Programs

Continuous professional development is essential for ensuring that teacher educators remain current with the latest digital tools and pedagogical approaches. Mentorship programs, where digitally literate

educators mentor their peers, can also foster collaboration and skill-building. **Mishra & Koehler** (2009) advocate for CPD programs that adopt the TPACK framework, combining technology with pedagogical expertise.

3. Investing in Infrastructure

Educational institutions need to invest in reliable digital infrastructure. This includes ensuring access to high-speed internet, up-to-date digital devices, and digital teaching aids. Governments and policymakers should collaborate with educational institutions to bridge the digital divide, particularly in rural or underdeveloped regions. **OECD** (2018) reported that well-resourced institutions are more likely to develop digitally literate educators and students.

4. Promoting a Culture of Innovation

Creating a culture that encourages experimentation with new digital tools and pedagogies can significantly boost digital literacy. Institutions must promote an environment where teacher educators feel supported in trying out new technologies. **Fullan** (2013) posits that innovation in education is driven by digital tools, but educators need to feel empowered to experiment and fail safely.

Conclusion

In an increasingly digital world, digital literacy is no longer an optional skill for teacher educators; it is a necessity. As the primary trainers of future educators, teacher educators must not only be proficient in the use of digital technologies but also adept at embedding them into teaching and learning processes. Despite challenges such as resource limitations and resistance to change, the benefits of digitally literate teacher educators—ranging from enhanced pedagogical approaches to the fostering of lifelong learners—are vast. Institutions, policymakers, and educators must collaborate to ensure that digital literacy is prioritized within teacher education programs to prepare future educators for the dynamic educational landscape.

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THE ROLE OF REFLECTIVE PRACTICES IN TEACHER EDUCATION

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Abstract

In the context of future trends in education and teachers' Professional Development, The Reflective Practices (Thinking About the Way You Do Things) in Teaching if we consider the difficulties faced by the teacher during the teaching and learning process, how it will be resolved will be discussed in this paper. During the classroom transaction, the problems or challenges that the teacher faces can be identified, and several problems can be solved to cater to the needs of the students. In the professional development of teacher candidates, reflective practice is becoming an increasingly important operator and referent. The educational research has focused a great deal of emphasis on one aspect of pre-service teacher education: how teacher trainees think and learn from their practice. As a means of enhancing such abilities and knowledge and raising the caliber of one's work, Moore claims that reflective practice is more about the "skills needed to reflect constructively upon ongoing experience" (Moore, 2000: 128). An essential part of every educational system is teacher education. It is founded on a country's philosophy, culture, and character and is intimately related to society. Through the preparation of knowledgeable, committed, and professionally competent educators who can satisfy the needs of the system, teacher education promotes the improvement of education in schools.

Keywords: Reflective Practices, Professional Development, Pre-service teacher education.

Introduction

Reflective practice is a way for students to figure out how to study more efficiently the next time by considering how they prepared for a previous test and how well they performed. Teachers who engage in reflective practice gather evidence about their teaching practices to analyze, interpret, and evaluate their experiences to improve their future instruction (Mathew & Peechattu, 2017; Farrell, 2016a). This type of inquiry is typically thought of as cyclical and systematic. Additionally, it is a process of creating meaning that helps educators advance (Rodgers, 2002). Reflective educators strive to better understand themselves and how the answers they have found relate to other ideas and experiences in addition to always trying to come up with better solutions. Several studies have consistently demonstrated the benefits of reflective practice (Loughran, 2002; Yalcin Arslan, 2019). Reflective practice, as the research indicates, is essential to changing two major facets of teachers' professional lives. The concept of "teacher identity" describes how educators see themselves in their role (Mockler, 2011). The phrase refers to a teacher's personal and professional facets. Pre-service teachers in particular must have a solid sense of who they are and how they fit into the larger context since this will affect the quality of instruction they provide. Fostering this awareness requires reflective practice (Beauchamp & Thomas, 2009). Put differently, reflective practice gives educators a chance to examine and improve their feelings, convictions, and individual teaching philosophies (Walkington, 2005). Slade et al. (2019), for instance, looked into how a teacher candidate's perception of her pupils' academic achievement changed after maintaining a reflective diary for about a semester and discovered that the teacher's sympathy for her pupils increased when she recognized that their low learning results and disobedience in the classroom were caused by their struggles with poverty. The results of this study support

Korthagen's (2017) claim that reflective practice helps new instructors understand what's going on in their heads. The reflection can result in novel and productive teaching practices (Korthagen, 2017). Second, reflective practice helps to improve the Caliber of teachers. Professional development, which is commonly defined as how a teacher acquires specific information and a set of abilities within a given context or scenario, is one component of teacher quality that is influenced by reflective practice (Koellner & Jacobs, 2015). Teachers can unlearn inefficient teaching strategies that could negatively impact students' learning experiences by reflecting on their practices, which raises their awareness of what they are doing (Ciampa & Gallagher, 2015). Pre-service teachers typically use reflection to enhance their instruction in areas such as classroom activities, lesson planning, and behavioral. Alger (2006) illustrates how reflective reflection affects pre-service teachers' instruction in the classroom and broadens their toolkit of problem-solving techniques. In Alger's study, pre-service teachers were able to transition from a teacher-centered to a more student-centered classroom after participating in reflective practice. Furthermore, their evaluation revealed that they used punishment to take charge of the classroom at the start of the first semester before converting to a relationship-building tactic by the conclusion of the second. Reflective practice often gives both in-service and pre-service educators a chance to pause and carefully consider their previous teaching experiences. Self-observation, self-analysis, and self-evaluation allow people to examine their experiences and uncover "the truth" about who they are.

Lastly, the influence of reflective practice on teacher identity and quality is discussed, and how technology might support reflective practice is explored.

1. Reflective Practice Concerns in Teacher Education in Teacher Education

A literature study claims that the concept of reflective practice has evolved throughout time. Changes in the reflective practice paradigm are the first aspect of its evolution that the review prompted, and the reflective practice process is the second aspect of its evolution.

Furthermore, the literature review advises instructors to use caution while implementing reflective practice in their practicums.

 2. The Reflective Practice Paradigm's Evolution:

Two of the most important thinkers, Dewey (1933) and Schön (1983), have offered some fundamental concepts for a shared definition of the phrase "reflective practice." According to Dewey, reflective practice is a systematic thought exercise in which educators make informed judgments about their instruction by using information from prior experiences, their knowledge, and their values, as opposed to making ill-advised choices based solely on habit. Stated differently, Dewey believed that problem-solving exercises and contemplative practice were comparable. Schön (1983), building on Dewey's work, introduces the idea of periods in which reflection occurs, extending the concept of reflective practice to account for the continuity of the thought process. Reflection happens before and after acquiring a reflection-on-action following the teaching process, but it can also occur during the teaching process itself (reflection-in-action).

Schön contends that educators make choices regarding their next teaching experiences depending on their perception of their prior ones. These two ideas have long served as the cornerstone of research on reflective practice, yet they are overly limited and inadequate to fully capture the complexities of

teachers' lives. To "fix" the mistakes they have made, teachers examine their experiences while teaching—a process known as "reflection-as-repair," according to Freeman (2016). Consequently, the conclusion drawn from Dewey and Schön's theories of reflective practice is also dominant in terms of instructional strategies or classroom conduct, but it misses one of the most crucial elements of teaching—the teacher herself. Teachers run the risk of providing flimsy and unproductive solutions in the following lesson if they ignore their core values, which include emotion, trust, courage, sensitivity, flexibility, decisiveness, spontaneity, and commitment while thinking back on their previous experiences (Korthagen, 2017).

Considering the aforementioned problem, scholars in the field of teacher education have lately presented more comprehensive methods of reflective practice, such as Korthagen's ALACT model (2017) and Farrell's framework for reflecting on practice (2019). Wright (2010) highlights that the goal of reflective practice should be to help instructors make reflection more meaningful for them, in addition to correcting their instructional habits. As a result, the goal of these more modern frameworks is to move the reflection's emphasis from action-oriented to meaning-oriented. According to Korthagen (2017), instructors can have a deeper understanding of the fundamental issues in the classroom by reflecting on their basic values in addition to their teaching abilities.

Evolution of the Reflective Practice Process When it comes to executing reflective practice, pre-service teachers may have an unclear picture of how to reflect. Three frameworks that can be used to guide and "scaffold" the reflective process in teacher education is introduced in this section. The first framework was first introduced by Gibb (1988) and is arranged in a cycle as illustrated in Figure The following explanation gives the advantages of reflective practice.

Reflective practice has a lot of potential advantages. Notably among them are the following:

Gaining fresh meaning and improvement of already known information, such as by clearing up present misunderstandings and a deeper comprehension of the relationships between theory and practice a better comprehension of the reasoning behind your behaviour, including the reasons behind a deeper comprehension of the relationships between theory and practice. A better your decisions and the methods you choose to follow. Deeper comprehension of the relationships between theory and practice. A better your decisions and the methods you choose to follow. Enhancement of your objectives and your decision-making guidelines (this also relates to improved self-awareness on aspects like your advantages and disadvantages.

The enhancement of your metacognitive skills, such as your capacity to build the memory and retention.

Review of Literature

Wang & Hartley, 2003: As our society navigates through the 21st century, technology plays a prominent role in everyone's life. A growing number of studies have explored how technology can be employed to promote pre-service teachers' reflective practice. The benefits of using two types of technology, namely, video and social media, are explored below.

Quigley & Nyquist, 1992: The power of using digital videos as a means to facilitate preservice teachers' reflection has been widely accepted. Videos allow for the complexities of the classroom to be captured in real-time with the power of video recording, pre-service teachers can see their teaching practice from

a "self-as-observer perspective" Stockero (2008) has reported that preservice teachers who use a video case-based curriculum engage in deeper reflection.

Rosaen et al. 2008: Point out that video-supported reflection, compared to memory-based reflection, enables pre-service teachers to shift the focus of their reflection on classroom management from technical issues to pedagogical issues.

Gelfuso & Dennis, 2014: Although videos do provide content that can be revisited throughout the reflection process, using only videos in the process cannot ensure a high level of reflection A combination of videos and interaction with the supervisor and peers can create a good condition for reflective practice to more effectively develop.

The lesson plan below tells us how effectively reflective practices help find and modify our desired learning objectives.

Iredale et al., 2020: Taking the benefits of technology and interaction with others into account, social media is another promising means for pre-service teachers to develop the ability to reflect. This is because social media creates a sense of community where people are encouraged to collaborate, discuss, share, and challenge ideas and beliefs.

Okseon (2010): Asked four pre-service teachers to write reflective journal entries and post each of entry on an online community website. They were also asked to select a journal partner to form a reflection dyad. The participants reported that this interactive online journaling facilitated their reflection as it allowed them to ask and answer in-depth questions, to offer additional ideas and suggestions, and to gain confidence from support received in reflective practice.

Farrell, Graham & Phelps, Farrell (2003) have described the situation that pre-service teachers face during their first year as a "sink or swim" experience. This connotes the frustrations and difficulties they have to encounter during that time, which leads to two critical questions that pre-service teachers need to answer so that they can establish an identity as a teaching professional.

Topic Name: Reflective Teaching.

1. Learning Objectives: Student Teacher will be able,
 ● To define the terms "Reflective practitioner" and "Reflective Teacher".
● List and explain the components of Reflective Practitioner.
● Describe the key process involved in it as defined by Donald Schon.
● Describe Zeichner and Liston's Model of Reflective Teaching
● Apply the process of reflection in the classroom process.
● Maintain reflective journals and narratives as methods of reflection.

2. Content Specifications:
● Reflective practice and reflective practitioner.
● Origin of reflective practice
● Components of reflective process
● Key aspects of the reflective process
● Zeichner and Liston's Model of Reflective Teaching
● Methods of reflection.

3. Method/strategy adopted: Lecture cum discussion method.

4. Learning Resources: PowerPoint presentation on Reflective Teaching

Stages of the Lesson	Intern's Activity	Student Teacher's Activity	Assessment
Introduction	★ Initiates conversation on reflection. ★ Extracts reasons for how mirrors help us. ★ Use their response to explain the main idea of "reflective Practitioner"	● Think and respond about the use of a mirror. ● Relate the concept of reflection to the process of teaching.	Presentation on the topic/group work/test.
Development and Application	Use an example of a topic and explain what exactly we mean by 'reflective practitioner'. ★ Explain Dewey's components of the reflective process. ★ Explain Donald Schon's key aspects of the reflective process.	Create a mental image of being in a teaching-learning situation. ● Try and understand the concept of reflective teaching at a deeper level. ● Making notes of the main ideas expressed in the	
	★ Describe features of reflective practitioners. ★ Explain Ways to practice reflective teaching. ★ Explain ways in which one could reflect.	explanation	
Conclusion and Recapitulation	★ Summarises the entire concept and its advantages	Recall and think about ways in which it could be applied in a classroom atmosphere.	

Donald Schon presented the Schon reflective paradigm in 1991 as a foundation for introspection. By distinguishing between reflection that occurs during an event and that which occurs later, the model adds another dimension to reflection. By examining individual actions at the time of an event and actions that might have been taken to successfully handle a given scenario, the use of this approach aids practitioners such as Nicole Wallace in improving the quality of their work. This model is distinct from all other models of reflection since it is used in a way that requires reflection both during and after an event, as opposed to being multi-stage or circular.

Schon Reflective Model Stages
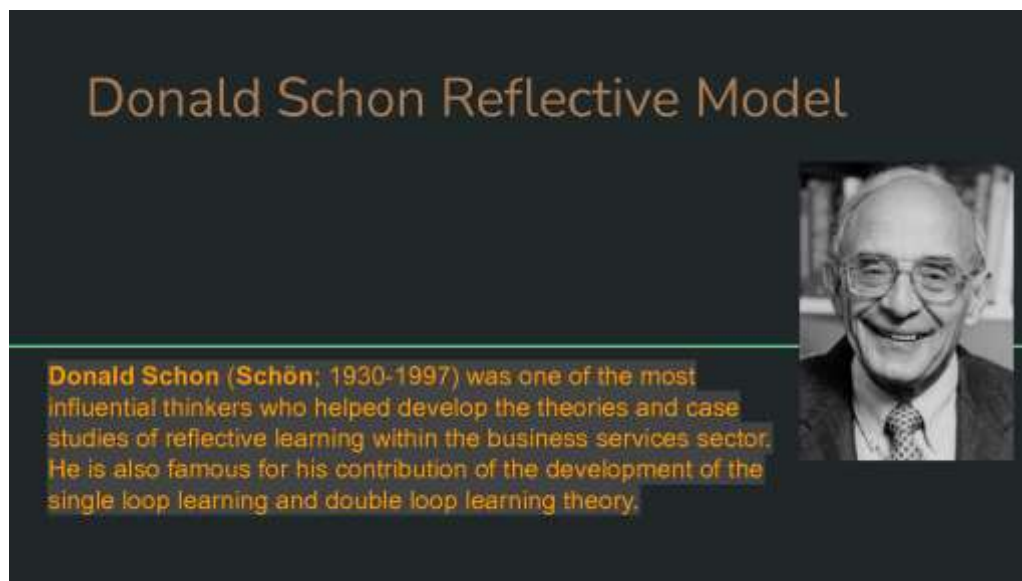
What is Reflection?

Reflection is an active process of witnessing one's own experience to examine it more closely and give meaning to it more closely, give meaning to it, and learn from it.

Reflection involves three elements: They are Returning to Experience, attending to feelings, and Evaluating experience.

Reflection can be of two types: Reflecting on action and reflecting in action ("thinking on our feet")

Schon's Reflective Model

a) Reflection in action
b) Reflection on action
   Experiencing
   Thinking on your feet
   Thinking about what to do next
   Acting straight away/action points
   Schon's Reflective Model:

Knowledge in action

- What do you already know about the situation?
- How is that information helpful?

Reflection in action

- What is happening?
- What are you feeling?
- What other factors are involved?

Reflection on Action

- What happened?

- Why did it happen?
- How can we deal with this situation in the future?

Schon's Reflective Model

Reflection in action: Reflecting as something happens, eg Consider the situation, deciding how to act, and acting immediately.

Reflection on action: Reflecting after something happens. Re-consider the situation, and think about what needs changing for the future.

On reflective actions

Habitual actions: Actions learned through habit to become automatic.

Thoughtful actions: Actions that require conscious manipulations.

Introspections: Awareness of feelings, but not why we have them.

Reflective actions

Content reflection: Reflection on what we perceive, we think, feel, or act upon.

Process Reflection: Reflection on how we perform the functions of perceiving thinking
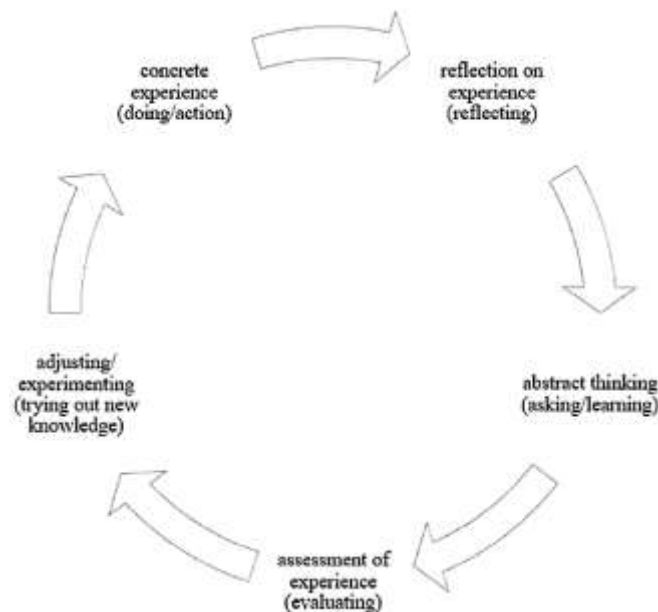
On Reflective Actions: The following are a few points of,

- Habitual Actions: Actions learned through habit to become automatic.
- Thoughtful actions: Actions that require conscious manipulations.
- Introspection: Awareness of feelings, but not why we have them.
- Reflective actions: Reflection on what we perceive, think, feel, or act.
- Content Reflection: Reflection on what we perceive, think, feel, or act upon.
- Process Reflection: Reflection on how we perform, the functions of how we perform, and the tasks of perceiving, thinking feeling, and acting.

- Premise Reflection: Awareness of why we think and do as we do.

Conclusion:

Throughout conclusion, this paper emphasizes reflective reflection as a way to help pre-service teachers throughout their careers. When engaging in reflective practice, it's important to remember that the process pays special attention to pre-service teachers' inner lives as well as difficulties in the classroom. Without attempting to determine whether the reflective framework is superior to the others, the article examines a variety of them. There is no "one-size-fits-all" framework, thus pre-service teachers should be introduced to a variety of frameworks gradually. The difficulties that have surfaced from the literature highlight significant issues that teacher educators should think about if they wish to incorporate reflective practice into their instruction. The final section of this essay explores potential applications of technology to strengthen reflective practice in the age of technology and emphasizes how reflective practice affects pre-service teachers' identities and the caliber of their instruction.

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DIGITAL EDUCATION OPPORTUNITIES AND CHALLENGES

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Abstract

Digital education is largely an innovation of the last few decades, although it already existed in various forms slightly earlier. Shortly, the educational system environments are anticipated as mitigation to unforeseen natural and artificial pandemics such as Covid-19 in 2020 by the significant changes associated with the digitalization of some portion of the system. This article aims to provide valuable perspectives of ICT and digital education into its future benefits, risks, and challenges of embracing the latest technologies in the digital era, and vast online open courses. We have checked a profound change in the way we interact and generate within the academics with the advent of internet technologies. Globally, the digital revolution favoured open access to information. Classrooms today have a lot of ICT resources nearly all the teachers have made great strides to incorporate digital technology to increase access to information and collaborative activities for the learners.

Keywords: - Digital Education, ICT, Online, E-Learning, Virtual Learning

Introduction:

Digital education is largely a result of the past few years, though it has already existed slightly earlier in various ways. It is obvious; however, that modern equipment and means of transmitting information are important for its growth. Thus, without the rapid development of computers and the Internet, this form of education would not be feasible. It can be inferred that they were primarily concerning digital education and somehow forced its advent because the proliferation of computers and broadband Internet gave a very strong impetus to use them in educational activities as well (Makosa, 2014). Consequently, interactive classes, modern e-learning courses, educational games, electronic assessments, educational resource portals, digital school registers, and learning process management systems have entered into daily existence today. This article aims to illustrate the context of digital education, the current state of its implementation, the anticipated outcomes, and concerns in this regard. The re-election here will culminate in the presentation of the viewpoints for interactive course books (Makosa, 2014).

Three related items in education are made possible by digital technologies: teaching without physical contact, immersive practice, and contact On-site. Clickers were an early device to improve interaction in class, but now the pervasiveness of smartphones enables s t u d e n t s to u s e   these devices as an alternative medium of contact with teachers and between students. We will clarify how to use top content produced for MOOCs to enhance on-campus classes, where a key added feature is personal interaction (Delgado Kloos et al., 2017).

The provision of electronic or digital educational facilities is known as e-learning. This involves materials for studying, preparation, knowledge transfer, etc. The successful implementation of e-learning is achieved with the aid of technology, modern pedagogies, degree of instructor and facilitator participation, quality of the programs, and other demographic factors. This article discusses the opportunities, threats, and challenges involved in delivering digital education

(Department for Education, 2019), (Naresh & Rajalakshmi M., 2017). Tools will continuously play an essential part in motivating institutions of higher education. To this end, educational practitioners, faculty, staff and administrators must counter academic integrity, human rights, and intellectual property concerns that have become a major concern in the educational environment (Delgado Kloos et al., 2017), (Cohen, 2009), (Habiburrahim, 2015).

Need and importance of the study:

It is unquestionable that, as we experience a rapid technology transition and reach a new millennium, new technologies have given instruments for reconstructing education. In particular, interactive technologies such as CD- ROMs, the Internet, and the Web create countless new tools and materials for educational expansion. The information and communication technology (ICT) that has emerged nowadays plays a major role in globalization, where national boundaries are blurred by instant communications, communication and even sharing of information (Cohen, 2009), (Habiburrahim, 2015).

The world's borders seem to be reduced in this global age. Other people living in other countries can easily know and perceive one activity that happens in a corner of a globe. Supported by various advanced technological technologies, a wealth of information, science, expertise, and other useful research findings and inventions can be accessed by people from different parts of the world, often from continents away. Besides, the Internet plays a paramount role in the educational environment. It is used as a class enhancement or as a vehicle for greater education, which is becoming increasingly popular. The Internet is now used in lecture halls, tutorials, laboratories, and in the preparation of assignments as a strong complement to the conventional forms students study and learn (Hammer & Kellner, 2001). There is a very similar match between the structures and processes of the Internet and the teaching and learning structures and processes in the conventional forms of education at the University (Cohen, 2009), (Habiburrahim, 2015).

Students need to be able to collect and use online information in a world that is increasingly adopting digital media as the principal means of communication. To learn to access the web objectively and effectively, they must be acquainted with the text formats encountered online. The typical texts encountered online involve certain processes of reading, such as determining the confidentiality of sources, drawing inferences from multiple texts, and navigating within and across pages, more than conventional printed texts do. Both of these processes can be learned and practiced in school environments (OECD, 2015).

Empowering young people to become full participants in today's digital public space, equipping them with the codes and tools of their technology-rich society, and enabling them to use online learning opportunities – all while exploring the use of digital technology to improve existing educational processes, such as student assessment or school administration – are goals that justify (OECD, 2015). The remarkable growth of advanced communication technologies has driven universities, businesses, and educational institutions into experimenting with alternatives to conventional teaching methods in classrooms (Favretto et al., 2003)[9]. ICT's growing pace and distribution already shows that our local universities and learning and science groups are no longer purely local, but have gone global (Beebe, 2004) (Nawaz & Qureshi, 2010).

Education, Teaching, and Technology:-

Christensen, Horn, and Johnson (2008) cited in (Salavati, 2016) add that with educational goals in mind, emerging innovations were not invented (Salavati, 2016). They argue that the modest influence that computers have had on how learners learn and teachers teach is due to the "perfectly linear, perfectly reasonable and perfectly incorrect" ways in which innovations are used in schools (Christensen, Horn & Johnson, 2008, p.73). They argue that the modest effect that computers have had on how learners learn and teachers teach. Equally, Bates (2015) notes that schools and the way they currently do things are most frequently simply added to emerging technologies (Salavati, 2016). Christensen and colleagues (2008) add that the way technology is implemented into classrooms only slightly strengthens the way teachers teach and the way the school is run, never enabling schools to take full advantage of technologies (Salavati, 2016).

Information and Communication Technology :-

Information and Communication Technology is a truncation, which means "Information and Communication Technology" ICTs are a paragliding concept that combines all developments for all digital data management and communication. ICT finds all current computerized programming vocations to support individuals, companies, and organizations as of now. ICT is difficult to depict because it is hard to keep up with the motions that happen so quickly. ICT is a matter of restricting, extracting, handling and transmitting computerized data. It can be identified as processing and communication agencies and highlights that differently support educational instruction, learning, and exercise scope (Nawaz & Qureshi, 2010), (Suleiman et al., 2020).

Thomas cited in (Madlela, 2015) Claims that Information and Communication Technology is frequently used as an extended synonym for information technology (IT), but is a more precise concept that emphasizes the role of unified communications and the integration of telecommunications, telephone lines, and wireless signals, computers as well as required business applications, middleware, storage, and audiovisual systems, allowing them to be integrated. Oliver (3), on the other hand, argues that the term ICT is now also used to refer to the convergence of audiovisual and telephone networks with computer networks through a single cable or connection system (Nawaz & Qureshi, 2010), (Madlela, 2015).

Digital Education:-

Digital education also referred to as Technology Enhanced Learning (TEL) or e- learning, is the creative use of digital resources and innovations while teaching and learning. Exploring the use of emerging technology offers teachers the ability in the classes they offer to design interactive learning environments, which can take the form of mixed or entirely online programs and courses (Delgado Kloos et al., 2017), (Banerjee et al., 2015), (Celeste McLaughlin, 2018).

Virtual Learning:-

Virtual Learning (VL) dated back to 1840, when Sir Isaac Pitman, the English inventor of shorthand, came up with the idea of delivering instruction via correspondence courses by mail. But only with the advances of modern technology has distance education grown to a multibillion- dollar market (Dinevski & Kokol, 2005). Virtual University (VU) at vu.edu.pak is the best example of virtual learning with zero-physical contact but virtually 100percent connected with its e- Students. The VU is

a 'university without walls', an unpacked virtual institution thus 'The University' as an institution, seizes to exist. Where content and instructions are delivered through the Internet, intranet, extranet, satellite TV, and CD-ROM with multimedia capabilities (Manochehr, 2007). The university, then, becomes far more externally oriented; an intermediary on the global stage, acting as a collaborator, client, contractor, and broker of higher education services (Goddard & Cornford, 2007), (Kundi & Nawaz, 2014), (Delgado Kloos et al., 2017), (Banerjee et al., 2015).

Online Learning:-

Online learning is highly versatile, allowing you to research around your busy schedule conveniently. The bulk of our learners also work when they research with us digitally (Banerjee et al., 2015), (Celeste McLaughlin, 2018).

Blended Learning:-

Blended techniques use different techniques to provide learning that incorporates face-to-face experiences with online activities. In short, the alignment between the elements of the classroom and the operation that is digitally activated differs based on the learning formulation and construction. The versatility inherent in this type of delivery allows instructors to rethink where and how they concentrate educational process and learners to build self- directed learning skills and electronic literacies (Delgado Kloos et al., 2017), (Banerjee et al., 2015), (Celeste McLaughlin, 2018).

Potential Opportunities for Digital Education:-

Rather than anything else, education influences the prospects of a nation for human growth and competitiveness. Fortunately, in education, the knowledge revolution provides some exceptional opportunities. Common sense teaches us that different learners should be trained differently by us. Parents show this innate insight as they interact with their children differently according to their unique ages (Dinevski & Kokol, 2005). Universities and even smaller corporate divisions are being able to afford integrated digital systems (Ezziane, 2007) cited in (Kundi & Nawaz, 2014).

a) **Enhancing Teaching & Learning:-** For all of our children and young people, digital technologies will enrich the learning experience. From consultation activities, we know that our students are already highly exposed to digital technology and will support its expanded use as part of their education (Scottish Government & APS Group Scotland., 2016), (Education in Digital Age: Opportunities and Threats, 1994), (Nawaz & Qureshi, 2010), (Salavati, 2016), (The Scottish Government, 2015).

b) **Innovation Imperative in A Global and Competitive Workplace:-** Economic indicators, particularly in the United States' high-wage industries, have led towards a decline in jobs and new firm growth. The competitive effect of a working environment compounds these trends. As shown by the life sciences industry, innovation and entrepreneurship are important to driving job creation (Banerjee et al., 2015), (Burkholder, n.d.).

c) **Enhancing Parental and Students Engagement:-** There is promising evidence thatthe use of digital equipment and software for direct communication with parents would improve compliance with teacher demands for involvement, behaviour, and learning support among learners (The Scottish Government, 2015), (Banerjee et al., 2015).

d)   **Increasing Student Enrichment:-** For learners using innovation, the Digital learning   process may be more relevant, engaging, and interactive (Burkholder, n.d.).

e)   **Mitigating   Inequality:-** For   many   high- poverty, rural, urban and many other underserved   learners who   may   not otherwise have access to these essential resources, designing an innovation-enriched curriculum will provide enhanced learning opportunities (Burkholder, n.d.).

f) **Anywhere, Anytime & Any Place:** - 24/7, the Virtual Classroom is accessible. Another strength brought   about   by   the   online learning format is time quality. Asynchronous communication via online conference programs enables the job, family, and study schedules of professional juggling to participate in class discussions (ION Professional E-learning Programs, 2020).

Conclusion:-

Many countries have responded to rapid technological change by reshaping school education to develop learners' capacities for working with data and computation. Despite the present situation, many nations' curriculum now lags behind digital education.

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STUDY ON THE TEACHER LEADERSHIP QUALITIES PERCEVIED BY STUDENT TEACHERS OF FOUR YEAR INTEGRATED TEACHER EDUCATION PROGRAMME -BA. B.ED & BSC. B.ED

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Abstract

This study investigates the teacher leadership qualities perceived by student teachers enrolled in the four-year integrated teacher education programs, B.A.B.Ed and B.Sc.B.Ed. The research sample includes 83 student teachers, and a specifically designed standardized tool prepared by researcher was employed to assess leadership qualities across three domains: Personal, Social, and Professional. Data was analyzed using statistical methods(t-test), revealing a mean score of 103.8 and a statistically significant difference between the expected and actual leadership qualities. The p-value (<0.0001) confirmed that the observed effect size was substantial, indicating a considerable gap between perceptions and expectations. These findings highlight the need for targeted development programs that focus on enhancing leadership qualities among pre-service teachers. The implications suggest that fostering these qualities will contribute to professional growth and institutional advancement.

Keywords: Teacher leadership qualities, four-year integrated teacher education programme-B.A.BEd and B.Sc.BEd.

1.1 INTRODUCTION:

The quality of education within a nation is intrinsically linked to the quality of its teachers, who act not only as educators but also as leaders within the classroom (Crowther, Ferguson, & Hann, 2009). Teacher leadership is now recognized as a vital component in creating a productive and nurturing learning environment that promotes both student and institutional success. In the current global context, teacher leadership extends beyond the classroom, requiring educators to play an active role in school management, curriculum development, and professional mentoring (Angelle & Teague, 2014).

Given the complexity of modern education systems, teachers must be equipped with the leadership skills necessary to guide their students, influence peers, and contribute to institutional reform. Leadership in teaching involves characteristics like decision-making, ethical behaviour, and the ability to motivate and engage students. Studies show that teacher leadership is central to improving student outcomes and enhancing school performance (Ankrum, 2016). Moreover, Khan and Malik (2013) emphasize that promoting leadership programs can recruit and retain highly effective teachers, which in turn improves the quality of education at a systemic level.

The current study seeks to explore the leadership qualities that student teachers perceive themselves to have gained throughout their training in four-year integrated teacher education programs. Specifically, the research focuses on student teachers in B.A.B.Ed and B.Sc.B.Ed programs. Teacher leadership is critical not only for career development but also for fostering a professional culture that supports continuous learning and adaptation to educational challenges. By examining the leadership qualities perceived by pre-service teachers, this study aims to inform teacher education programs on how best to prepare future educators to take on leadership roles both inside and outside the classroom.

2.1 Review of Related Literature:

Crowther, Ferguson, and Hann (2009) highlighted that developing teacher leadership is fundamental to empowering educators and enhancing their professional competence. Their research indicated that teacher leadership is integral to creating a more empowered and professional teaching force.

Angelle and Teague (2014) posited that teacher leadership is centered on increasing teachers' awareness of administrative decisions and policies, which is key to building leadership capacity within the profession. Their study emphasized that when teachers are included in administrative dialogues, their leadership capabilities are significantly strengthened.

Ankrum (2016) found that the leadership qualities exhibited by teachers play a vital role in school development by ensuring the delivery of high-quality education. This highlights the importance of teacher leadership in achieving institutional success.

Khan and Malik (2013) argued that the promotion of teacher leadership programs is instrumental in recruiting, motivating, and rewarding proficient teachers. Their research underscores the importance of leadership programs in sustaining an accomplished teaching workforce.

Helterbran (2010) emphasized that teachers must overcome the notion of being "just a teacher" and instead take on leadership roles that involve identifying barriers to student success and actively working to remove them. Teachers, therefore, must be leaders who are committed to both student and institutional advancement.

3.1 Need for the Study:

The study of teacher leadership qualities among pre-service teachers is essential, as the leadership traits acquired during their training significantly influence their future professional roles and career trajectories. The development of these leadership qualities is crucial for shaping their ability to guide and inspire students, contribute to institutional progress, and uphold professional standards. Therefore, the present study seeks to investigate the teacher leadership qualities as perceived by student teachers enrolled in the four-year integrated teacher education programs, namely B.A.B.Ed and B.Sc.B.Ed.

3.2 Objectives of the Study:

1. To examine the teacher leadership qualities among student teachers enrolled in four-year integrated teacher education programs (B.A.B.Ed and B.Sc.B.Ed).

3.3 Hypotheses of the study:

3.3.1 Null Hypothesis (H$_0$): There is no significant difference in the perception of leadership qualities among student teachers.

3.3.2 Alternative Hypothesis (H$_1$): There is a significant difference in the perception of leadership qualities among student teachers.

4.1 Methodology for the study:

The present study employed a survey research method to collect data on the teacher leadership qualities perceived by student teachers enrolled in four-year integrated teacher education programs (B.A.B.Ed and B.Sc.B.Ed).

4.2 Tool for the Present Study

The tool used for this study was a **standardized five-point Likert scale**, specifically designed to measure the **teacher leadership qualities** of student teachers enrolled in four-year integrated teacher education programs (B.A.B.Ed and B.Sc.B.Ed).

This Likert scale covered three domains of teacher leadership qualities:

1. **Personal Leadership Qualities** – Evaluating traits such as self-confidence, decision-making ability, and emotional intelligence.
2. **Social Leadership Qualities** – Focusing on communication skills, collaboration with peers, and the ability to foster a positive learning environment.
3. **Professional Leadership Qualities** – Assessing ethical behavior, commitment to continuous learning, and the ability to lead within an educational institution.

The scale ranged from 1 to 5, where:

- 1 = Strongly Disagree
- 2 = Disagree
- 3 = Neutral
- 4 = Agree
- 5 = Strongly Agree

The tool was validated through a pilot study and standardized to ensure its reliability and appropriateness for assessing the specific leadership qualities in the target population. Data collected using this tool was then analyzed statistically to determine the perceptions of teacher leadership qualities among the student teachers.

4.3 Sampling of the study:

The study employed purposive sampling, selecting 83 student teachers enrolled in the four-year integrated teacher education programs, B.A.B.Ed and B.Sc.B.Ed. This sampling method ensured that the participants were representative of the targeted population for this study.

4.4 Data Analysis & Findings:

The data was analyzed to determine the statistical significance of the difference between the perceived teacher leadership qualities of student teachers and the hypothesized mean. The results are as follows:

Mean (M)	103.81
Standard deviation (SD)	9.18
Sample size (n)	83
Standard error (SE)	1.01
Degrees of freedom (df)	82
Hypothesized mean	125.00

P-Value and Statistical Significance

The two-tailed p-value was calculated to be less than 0.0001, which is considered to be extremely statistically significant by conventional criteria. This result suggests that there is a significant difference between the actual mean and the hypothesized mean.

Confidence Interval
- **Hypothetical mean:** 125.00
- **Actual mean:** 103.81
- **Difference between hypothetical and actual means:** -21.19
- **95% confidence interval of the difference:** [-23.20, -19.19]

The t-value was 21.04, and the standard error of the difference was calculated as 1.008. These results indicate that the sample mean of 103.81 is significantly different from the hypothesized mean of 125.

Hypothesis Testing
- **Null Hypothesis (H_0):** The population's average teacher leadership qualities are equal to the hypothesized mean (125).
- **Conclusion:** Since the p-value is less than 0.05 ($p < 0.0001$), we reject the null hypothesis (H_0). The population's average teacher leadership qualities are significantly different from the hypothesized mean.

P-Value

The p-value equals 8e-35 (approximately 8.1×10^{-33}), indicating an extremely low probability of committing a Type I error (rejecting a true null hypothesis). Therefore, the likelihood of incorrectly rejecting H_0 is negligible. This result supports the alternative hypothesis (H_1).

Test Statistic (t-value)
- The test statistic (t) equals -21.1, which falls outside the 95% region of acceptance [-2, 2].
- The average of 103.81 also lies outside the 95% confidence interval for the expected mean [123, 127].
- The 95% confidence interval for the sample group is [101.8, 105.8], suggesting the true mean of the sample lies within this range.

Effect Size
- **Effect size (Cohen's d):** 2.31
  This large effect size indicates that the magnitude of the difference between the actual mean and the expected mean is substantial.

4.5 Interpretation
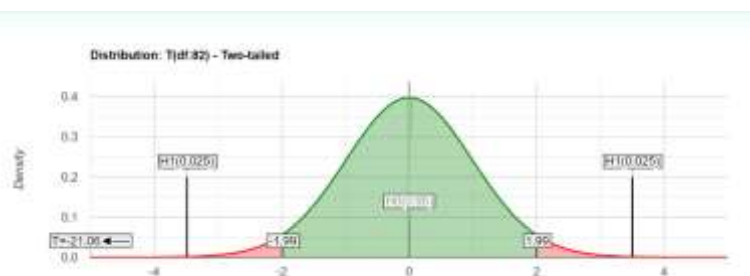
Fig.1:T-Distribution Curve for Two-Tailed Hypothesis Test (df = 82)

Given that the p-value is less than 0.05, the null hypothesis (H_0) is rejected at the 5% significance level. This indicates that the perceived teacher leadership qualities among student teachers are **significantly different** from the expected average, with a large effect size (d = 2.31), suggesting a notable disparity between expectations and actual perceptions.

4.6 Discussion

The findings of this study are consistent with previous research, which highlights the importance of teacher leadership in improving both individual and institutional performance (Greenlee, 2007). The significant gap between expected and actual leadership qualities suggests that current teacher education programs may need to place a greater emphasis on leadership training. Developing teacher leadership can empower pre-service teachers and provide them with the skills needed to navigate the complexities of modern educational environments (Helterbran, 2010).

This study contributes to the growing body of literature on teacher leadership by offering insights into the leadership qualities perceived by student teachers. The results indicate that while student teachers do exhibit some leadership qualities, there is considerable room for growth, particularly in the areas of decision-making and professional collaboration. These findings align with those of Angelle and Teague (2014), who argue that teacher leadership is a critical factor in educational reform and school improvement.

5.1 Implications for the Field of Education

1. **Curriculum Enhancement:** Teacher education programs should integrate more explicit instruction and practical experiences in leadership, focusing on areas like collaboration, conflict resolution, and ethical decision-making. Incorporating leadership workshops, mentoring programs, and collaborative projects into the curriculum could foster these essential skills.
2. **Professional Development:** Institutions should offer continuous professional development opportunities for teachers to refine their leadership abilities. This would ensure that even in-service teachers have access to ongoing learning and growth in leadership.
3. **Policy Implications:** Educational policymakers should consider creating incentives and frameworks that promote leadership development within teacher education. For example, certification programs that recognize teacher leaders could motivate teachers to pursue leadership roles.
4. **Mentorship Programs:** Establishing mentorship initiatives where experienced teachers guide pre-service teachers in leadership roles could bridge the gap between theory and practice. This could also facilitate smoother transitions into leadership positions in their teaching careers.
5. **Collaborative Learning:** Schools and teacher education programs should foster environments that promote collaborative learning among teachers. Building collective leadership can lead to a more supportive, innovative, and effective teaching culture, ultimately benefiting students and institutions alike.

5.2 Suggestions for Future Studies

1. **Longitudinal Research:** Future studies could adopt a longitudinal approach to track the development of teacher leadership qualities over the course of teacher education programs and into the early years of teaching careers. This could provide deeper insights into how teacher leadership skills evolve over time.
2. **Comparative Studies:** Comparative research could explore teacher leadership qualities across different types of teacher education programs, such as traditional versus integrated models, or programs in urban versus rural settings. This could identify specific program elements that are more effective in fostering leadership skills.
3. **Qualitative Analysis:** While this study utilized quantitative methods, future research could benefit from qualitative approaches, such as interviews and focus groups, to explore how student teachers understand and experience leadership in their training.

4. **Exploration of Intervention Programs:** Future research could investigate the effectiveness of specific interventions or professional development programs aimed at enhancing teacher leadership qualities. Experimental studies could assess which types of interventions lead to the most significant improvements in leadership capabilities.

5. **Cross-Cultural Studies:** Exploring teacher leadership qualities in diverse cultural contexts could offer insights into how cultural factors influence the development and perception of leadership skills in education. Such studies would be valuable in understanding global trends and challenges in teacher leadership.

5.3 Conclusion

This study has illuminated the crucial role of teacher leadership qualities in shaping the **career paths** of pre-service teachers enrolled in four-year integrated teacher education programs, such as B.A.B.Ed and B.Sc.B.Ed. The findings reveal a significant disparity between the expected and actual perceptions of leadership qualities, suggesting that current training programs may not be adequately equipping future teachers with the leadership skills necessary for navigating complex educational environments **(Crowther, Ferguson, & Hann, 2009).**

Teacher leadership is vital not only for personal and professional growth but also for the overall development of schools and educational institutions. The large effect size observed in this study underscores the importance of leadership training in teacher education (Helterbran, 2010). By fostering leadership skills—such as decision-making, collaboration, ethical behavior, and student engagement—teacher education programs can better prepare pre-service teachers to take on leadership roles both inside and outside the classroom (Ankrum, 2016). Moreover, promoting teacher leadership may lead to improved student outcomes, enhanced school performance, and a more professional and empowered teaching workforce (Angelle & Teague, 2014; Khan & Malik, 2013).

The study indicates that while student teachers demonstrate certain leadership qualities, there is considerable potential for growth, especially in the areas of professional and social leadership (Helterbran, 2010). This finding highlights the need for teacher education programs to reassess their curricula and introduce more comprehensive leadership development opportunities. By enhancing the leadership capabilities of pre-service teachers, these programs can better prepare them for future roles in education, ensuring they are equipped to lead effectively within their schools. Strengthening these skills will not only advance their careers but also contribute positively to the overall functioning and success of educational institutions (Crowther et al., 2009; Greenlee, 2007).

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E-LEARNING PLATFORMS: AN INNOVATION IN TEACHING AND LEARNING

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Abstract

Education has the ability to completely transform a Students life, as is well known. Learning modifies perception and thought processes. As a result of education and learning, you frequently challenge pre-existing assumptions. The purpose of education is to help Student and teacher think more critically and to help them form perspectives and views about life. It can help you become more intelligent and respected by others. A teacher with a wealth of ideas is able to explore of subjects, including the environment, and society. Education-based knowledge can be very helpful in guiding you towards the proper choices and decisions. Several Studies have been conducted so far in the field of Education with respect to the help with between E-Learning and an innovation in teaching. And Learning

E-Learning Platforms is a new and innovative Teaching and Learning to enhance the teaching and learning process. This Platform is widely used in schools as well as colleges and universities. This Platform facilitates the teacher and the learner to interact in the dual mode system i.e., online and face-to face mode. This paper highlighted the concept of Online Platform, role of learner in the E-Learning, apps and mode of E-Learning platforms. Features of online learning, effectiveness of innovation of for teacher and learner. The variety of strategies for resource description taken by these platforms is also discussed. These range from formal machine-readable metadata to human readable text. It is related that resource description should be seen as a purely technical activity.

Key Notes: *E-Learning Platforms, Educational apps, Online Teaching Strategies.*

Introduction

An electronic learning platform is an integrated set of interactive online services that provide trainers, learners, and others involved in education with information, tools, and resources to support and enhance education delivery and management. One type of eLearning software is a learning management system (LMS).

There are many companies out there that offer online learning platforms. Some of these virtual learning environment platforms allow you to host and sell online courses, allowing you to run your own business. Other platforms simply offer an interface in which users can interact with your content but might not be the best fit for your audience. So how do you decide which platform is the best to host your training courses?

In the end, you're going to choose the platform that presents your course in the most engaging way for your learners. To help you decide how to differentiate between different LMS options, we've created a shortlist of the most important aspects to consider when choosing the right platform. The collective creativity of the educational process participants made it possible to develop a high-quality corporate culture of the students involved, which became the basis for establishing business partnerships in the system of education, science, and business. Based on the observations, a universal model of an effective educational process in the digital age has been developed.

What is E-Learning Platform

The world has shifted towards online learning for quite some time after the COVID-19 pandemic. An online learning platform is a web-based digital system designed to facilitate education and training. An e-learning app is a digital platform that is designed to facilitate educational and training experiences through electronic devices like smart phones, tablets, or computers.

The conceptualization of the use of computerized systems to ensure or facilitate the educational process is based on the use of technological solutions for educational purposes. (For example, online learning, virtual learning, distance learning, mobile learning, MOOC, learning management systems)

- **MOOCs :** MOOCs are not repositories in any conventional sense of the word, and are rarely open in the OER sense, however it is useful to consider them here as examples of widely disseminated collections of learning resources. What many MOOC platforms lack, however, is the means to provide access to or disseminate information about their resources outside the context of the platform. Normally, the content in a MOOC is only accessible for the duration of the course; if the content remains available after the course has ended, it tends to be available to registered users only. However this is not always the case, for example content from the University of London International Programmes' MOOC on English Common Law is both openly licensed and available to all. Some institutions may also make their MOOC resources available through other platforms including course blogs and services such as YouTube.

- The digital transformation of the education systems has introduced a new ecosystem of teaching and learning - e- learning.

- It is an innovative web-based system developed based on digital technologies and other forms of instructional material which primarily aims to provide learners with a personalized, student-cantered, open, enjoyable and interactive learning environment that supports and enhances learning.

- E-learning should not be confused with the concept of blended learning, which is defined as the effective integration, or fusion, of face-to-face and online learning in accordance with the educational needs and goals of students.

- A number of web resources integrated into virtual learning platforms allow the selection and adaptation of information, collaboration and learning resources.

- Higher education students have a variety of ICT resources offering integrated media typologies such as RICA (information, collaboration, and learning) or SECTIONS (students, ease of use, costs, teaching functions, interaction, organization, networking, security).

How to choose the best online learning platform

In general, you should look at structure, course content, community and price when evaluating which online learning platform is best suited for you. This will apply regardless if you're using it to learn or to monetize your content! Choosing the right online learning platform will generally mean balancing these four aspects in a way that works best for you.

1. Structure of the platform

Course structure is important because it leads to a better learning experience and more effective delivery of professional development programs. As an example, you can probably piece together

knowledge on almost any topic through YouTube, but it would lack a structured and progressive environment. This would make it hard for students to learn independently.

2. Available course content

Looking at the course content is key to whatever you're planning to learn or teach. All online degree programs and course materials are somewhat unique in how they approach any given subject. Take web development or programming, for example. There are so many principles, languages and frameworks that you can learn that it can't simply be covered by individual courses. Some specialization is necessary.

If you're planning to deliver a course through an online learning platform, it will help to look for ones that offer similar topics already. You can also look for platforms that offer similar set-ups. Free or mini courses attract a much different audience than Bachelor's degree programs!

3. Community support

Community makes the learning process much more fun and effective. When you're stuck and can ask your peers for help, it reinforces what you've just learned with another perspective. Plus, doing something with a cohort of students is much more motivating than going alone. From the teaching perspective, you can leverage learning communities to empower brainstorming, independent problem-solving, and passion-building for the course topic.

4. Pricing

Price is another key factor in selecting course materials that work for you. There are many free courses available but paid ones tend to be more engaging and of higher quality. Some courses offer free trials while others offer refunds if you don't like it. Some courses give you lifetime unlimited access while others relies on a subscription model or only work for a limited time.

Whether you're monetizing or purchasing a course, you need to consider the value that the course provides to the student. Is the topic of interest, and does it provide enough content to be worth the pricing model offered? When you're selling through an online learning tool, you'll also want to consider if there are any added costs. Sometimes the cost is accrued per sale, and sometimes it is a monthly fee.

Kinds of online learning platforms

Now that you know what online learning platforms offer, and have a general idea of what you're planning to study or teach, you can see which one of these 10 top-notch learning platforms suits you best. Thinkific, Coursera, LinkedIn Learning, Skill share, edX, Open Learning, Udemy, Treehouse, Master Class, Khan Academy.
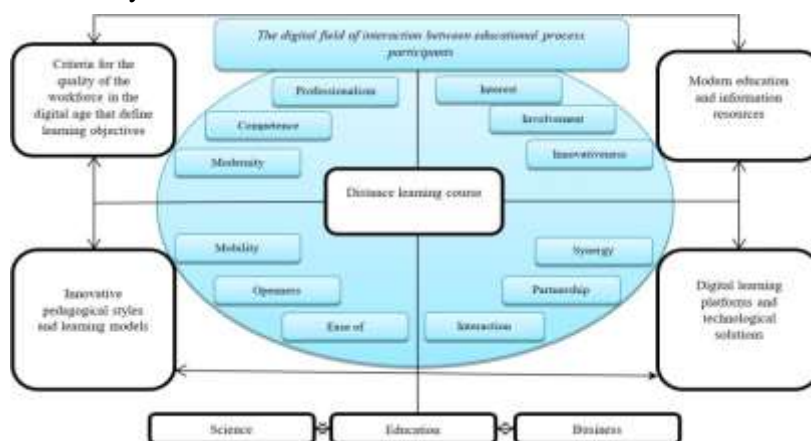
1. **Thinkific :**   Learn to create courses for free, Flexible, intuitive system to create your own courses, Plenty of customer support for course creators. No library of courses to discover.
2. **Coursera :** More than 1,500 courses are free, A variety of subjects, from arts to computer science Official certificates recognized by many employers, Free courses don't come with certificates, some courses have time limits.
3. **LinkedIn Learning :** 17,000+ courses available, Detailed how-tos for the most popular software, Easily add new certifications to your LinkedIn profile, Need a LinkedIn profile to access learning
4. **Skill share :** More than 35,000 courses available, a mobile app for on-the-go learning, learning from "real" people rather than organizations. Courses rarely go in-depth; Instructors may not have professional training.
5. **EdX :** A large library of high-quality courses, Earn a bachelor's or a master's degree, Works with Ivy League schools, not as many courses in creative fields.
6. **Open Learning** : Use credentials toward university degrees, Supportive community, Platform powered by AI, Courses can be expensive.
7. **Udemy** : The largest selection of courses, 30-day money-back guarantee, No subscription No deadlines. Some courses can be low quality, No credits for higher education.
8. **Tree house :** High-quality progressive courses, A built-in text editor for assignments, Affordable, Not many options besides programming.
9. **Master Class :** Celebrity instructors, High-quality videos and unique content, Introductory knowledge in most courses, No ability to measure progression, Smaller content creators cannot freely publish courses.
10. **Khan Academy** Free courses, A variety of topics, Supports a charity initiative, Focused on K-12 students.

Importance of e learning platforms
- Personalized learning experience
- Reduced costs
- Accessibility
- Creates an online learning community
- Flexibility
- Scalability
- Improved engagement
- Interactive eLearning
- Collaboration opportunities
- Consistency
- Continuous professional development
- Data and analytics
- Engaging style of learning
- Environmental sustainability
- Interactive and engaging content

Conclusion

The study describes the effectiveness of digital technological solutions in education. Students, postgraduates, teachers, and medical business representatives have tested a comprehensive educational product based on the capabilities of learning management system (LMS) platforms, the implementation of which made it possible to ensure interaction between education, science, and business by facilitating the ex- change of knowledge and the generation of innovative solutions.

For an example of this approach, see the Core Materials project described above. Syndicating resources (not just metadata) via aggregators and global OER repositories is another positive step that projects can take to ensure their resources continue to remain available. Consequently, we suggest that, currently, the best way forward to ensure the continued availability of OERs is to describe them in such a way that makes them discoverable by major search engines, to reduce reliance on a single point of deposit and explore what may be learned from preservation and syndication approaches employed in other domains.

The collective creativity of the educational process participants made it possible to develop a high-quality corporate culture of the students involved, which became the basis for establishing business partnerships in the system of education, science, and business. Based on the observations, we have developed a universal model of an effective educational process in the digital age.

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A STUDY ON INFLUENCE OF DEGREE COLLEGE PRINCIPAL LEADERSHIP ON THEIR OTHER FACTORS

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Abstract

This study aimed to see whether there is an influence of Degree college principal leadership, organizational culture, and teacher competence on teacher performance. Another aim was to see how much influence these factors have on teacher performance either partially or simultaneously. The research used a quantitative approach with survey methods. Analysis of the data used was multiple regression. Participants involved in the study were 300 teachers in Govt. Degree Colleges of Mysore by using proportional stratified random sampling. The results of the study showed that there was a significant influence on the Degree college principal leadership variables, organizational culture, and teacher competence on teacher performance. This research was also useful to find out the factors that can improve teacher performance, so that it is expected to be a theoretical or practical consideration in Degree colleges in order to improve the quality of teachers and Degree colleges.

Key words: Degree College Principal Leadership, Organizational Culture, Teacher Competence, Teacher Performance

1. Introduction.

One of the key elements in a country's growth is its level of education. Not only may the educational process determine whether a student receives a high-quality education or not, but poor teacher performance can also have an impact. Performance is the outcome and work ethic attained in order to do the assigned duties and obligations within the allotted time frame. Teachers have long been viewed by the government and scientific community as a vital component of the educational process. Because in the field of education, the interaction between students and teachers has a significant role in both information acquisition and the development of students' personalities. Low-quality teachers will have an effect on a number of factors, including pupils' learning and achievement. Because teachers play an important role in regulating the learning environment that makes students active in learning activities. Given its major impact on student accomplishment, the professional performance of teachers is a topic of great importance to examine. However, this position is inextricably linked to the Degree college environment, student characteristics, and educational setting.

Additionally, teachers may boost student interest in learning by projecting confidence, fostering a pleasant learning environment, and staying in touch with their pupils. Students' motivation to learn is also influenced by the instructional qualities of their teachers, such as cognitive stimulation and classroom management.

Another factor that may have an impact on teacher performance in Degree colleges is the organizational culture of the Degree colleges. The definition of organizational culture is a system of shared meanings and values among all members of the organization that sets it apart from other organizations. Organizational conditions can affect the performance of teachers in Degree colleges and

that performance will improve if moderated by the acceptance or attachment of teachers to Degree colleges owned. The more at ease a teacher is with the institution, the more of an impact it has on students' academic success. While a teacher's workload at a Degree college that comes from a variety of sources would undoubtedly impair performance.

In previous studies, leadership and organizational culture correlated positively and influenced teacher performance. Hasan in his research also mentioned that work motivation, Principal leadership, and organizational culture were predictors of teacher performance. In addition, teacher performance and Degree college principal leadership are positively correlated and significantly influence teacher performance. Likewise, organizational culture and teacher competence are positively correlated and affect teacher performance. In connection with the description, the problem affecting performance is the implementation of the certification program, and competence is influenced by the leadership of the Degree college principal and organizational culture.

According to the results of the prior study, no research has been discovered that addresses the relationship between organizational culture, teacher competency, and principal leadership and how it affects teacher performance. Additionally, studies looking at the factors in Karnataka's Degree colleges have not been identified.

It is hoped that the results of this study can be used by educational institutions, especially in Mysore to improve teacher performance as the main resource in Degree colleges

2. Objectives of the study:
1) To find out interaction effect of leadership skills on Teacher Performance among teachers.
2) To find out interaction effect of organizational culture on Organizational culture among teachers.
3) To find out interaction effect of Teacher Competence on Teacher Competence among teachers.

3. Hypotheses:
1) H_01:There is no significant relationship between leadership skills and Teacher Performance among teachers
2) H_02:There is no significant relationship between Organizational culture and Teacher Performance among teachers
3) H_03:There is no significant relationship between Teacher Competence and Teacher Performance among teachers

4. Operational Definitions of the Terms Used:
The key terms used in the study were operationally defined as under:
1) **Leadership skills:** Leadership skills are skills you use when organizing other people to reach a shared goal. Whether you're in a management position or leading a project, leadership skills require you to motivate others to complete a series of tasks, often according to a schedule.
2) **Organizational culture:** The study of organizational culture of Degree colleges provides the basis for evaluation of Degree college. It is the resultant accumulated effect of the ways

in which the principal interacts with teachers and the way teachers interact among themselves and with the principal.

3) **Teacher competence:** Teacher competence refers to the overall ability and authority of teachers in carrying out their profession, including responsibilities in educating students with knowledge and skills. It encompasses various competencies such as pedagogical, personal, social, and professional competencies, which are essential for teachers to become ideal and professional educators . These competencies enable teachers to effectively bring about intended changes in the behavior of learners and support the teaching and learning process . In addition to transmitting knowledge, teachers also play roles as planners, managers, leaders, counselors, innovators, reflective practitioners, lifelong learners, and adapters of technologies. Personality competence is another important aspect of teacher competence, as teachers are responsible for enhancing the potential and quality of students' personalities.

4) **Teacher Performance:** Teacher Performance is the set of actions, attitudes, and behaviors in the teaching-learning environment that results in achieving educational goals for students.

5. **Design of the study:**

5.1. **Research method:**

Descriptive research method has been adopted for the present study.

5.2. **Sample:**

This research employed proportional stratified random sampling technique. This is a method of selecting the sample size of a population where each member of the population has the same opportunity and all the possible mergers selected as a sample have the same opportunity. There were 300 teachers in Govt. Degree colleges of Mysore selected as the research sample.

5.3. **Tools used in this study were:**

1) Multifactor Leadership Style (MLQ-5X) revised by Bass and Avolio (1995)
2) Organizational Culture: Mahindra Saxena (2000)
3) Teacher Competence by Rajeshwari (2012)
4) Teacher Performance: Prepared by investigator

5.4. **Data collection procedure:**

The investigator officially contacted and requested the principals of the selected Pre-university colleges and explained the purpose and procedure to fill up the Research Instruments Booklet (consisting of an Appeal to the Respondents, Demographic Data Sheet, Consent Form and 4 Research Instruments) and requested their whole hearted kind co-operation to make the study successful. The Research Instruments Booklets were distributed to the principals to mark their choice of responses against the corresponding statements by putting tick ($\sqrt{}$) mark. Due to their busy schedules, the respondents took approximately 1-3 days to fill the tools completely. The filled in Tool Booklets were collected back by the investigator.

5.5. Statistical techniques used:

The statistical techniques used to analyse the data in the present study are r-test, Sub-structural regression test were used.

6. Hypotheses wise analysis of data:

To test this hypothesis, 'r' test of significance for relationship between different categories was employed and the details are presented in tables:

1) H_01:There is no significant relationship between leadership skills and Teacher Performance among teachers

Table-1: The r-value of scores of leadership skills and Teacher Performance of teachers.

Type of sample	N	'r' Value	Significance
Leadership skills	300	0.724	Significant at 0.05
Teacher Performance	300		

Table 1 shows a significant and positive relationship was observed between leadership skills and Teacher Performance of teachers (r=0.724, p<0.05) at 5% level of significance. Hence, the null hypothesis-1 is rejected and alternative hypothesis is accepted. It means that, leadership skills and Teacher Performance of teachers are dependent on each other. In another words, the leadership skills scores are increases or decreases with increase or decrease in Teacher Performance Scores of teachers. It means leadership skills of teachers influence on their Teacher Performance.

2) H_02:There is no significant relationship between organizational culture and Teacher Performance among teachers

Table-2: The r-value of scores of organizational culture and Teacher Performance of teachers.

Type of sample	N	'r' Value	Significance
organizational culture	300	0.811	Significant at 0.05
Teacher Performance	300		

Table 2 shows a significant and positive relationship was observed between leadership skills and Teacher competence of teachers (r=0.811, p<0.05) at 5% level of significance. Hence, the null hypothesis-3 is rejected and alternative hypothesis is accepted. It means that, organizational culture and Teacher Performance of teachers are dependent on each other. In another words, the organizational culture scores are increases or decreases with increase or decrease in Teacher Performance Scores of teachers. It means organizational culture influence on their Teacher Performance.

3) H_03:There is no significant relationship between Teacher Competence and Teacher Performance among teachers

Table-3: The r-value of scores of Teacher Competence and Teacher Performance of teachers.

Type of sample	N	'r' Value	Significance
Teacher competence	300	0.741	Significant at 0.05
Teacher Performance	300		

Table 3 shows a significant and positive relationship was observed between leadership skills and Teacher competence of teachers (r=0.741, p<0.05) at 5% level of significance. Hence, the null hypothesis-3 is rejected and alternative hypothesis is accepted. It means that, Teacher Competence and Teacher Performance of teachers are dependent on each other. In another words, the Teacher competence scores are increases or decreases with increase or decrease in Teacher Performance Scores of teachers. It means Teacher Competence of teachers influence on their Teacher Performance.

7. **Table-4: Sub-structural regression test result:**

	Leadership skills	Organizational culture	Teacher competence	Teacher Performance
Leadership skills	1	0.668	0.844	0.878
Organizational culture	0.653	1	0.564	0.721
Teacher competence	0.844	0.564	1	0.694
Teacher Performance	0.878	0.721	0.694	1

Table 4 shows the largest correlation is between the leadership skills and teacher competence variables (correlation value of 0.844). The second largest correlation is the correlation between leadership skills and organizational culture with a correlation value of 0.668.

Based on the Sub-structural regression test of the analysis of the magnitude of the influence of the leadership skills, organizational culture, and teacher competence have a total influence on teacher performance. It means that there is a simultaneous relationship between leadership skills, organizational culture, and teacher competence on teacher performance. It can be interpreted that there is a joint influence between leadership skills, organizational culture, and teacher competence on teacher performance.

8. **Conclusion:**

This study concluded that simultaneously, leadership, organizational culture, and teacher competence affect teacher performance positively and significantly. This means that the higher the independent variable in this study, the higher the teacher performance variable.

Overall, the three independent variables have a great contribution, so that they can be considered in the field to pay attention to these three variables in determining teacher performance. This study has major implications for institutions in order to consider the various independent variables that exist as important factors that must be considered to support teacher performance. Future research should be able to further explore other psychological variables

that are not widely identified at this time. The addition and heterogeneity of more samples can also increase the quality of the expected results.

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TEACHARS PROFESSIONAL DEVELOPMENT

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Abstract

Teachers Professional Development is Defined as activities that develop the skill, knowledge, experience and other characteristics of teacher. Teacher Professional learning is a complex process which requires cognitive and emotional involvement of teachers individually and collectively, teachers Professional Development (PD) is crucial to improving students outcomes because PD involves a multi dimensional structure and changes across a teachers Professional life.

Our educators needed to update their knowledge in emerging technologies such as all, and Skill for adapting to new modes of teaching teachers ongoing learning has a significant impact on their teaching. It is not always easy for them to be motivated and willing to change for the best. effective Professional Development provides teachers with adequate time to learn, practice, implement, and reflect upon new strategies that facilitate changes in their practice. I discussed the best ways for teachers to improve their performance in teaching and how that can effect their students learning.

PD is important because it helps teachers keep up with changing educational needs and wider world it also helps teachers develop the skills and expertise they need to become better teachers.

Professional Development is learning to earn or maintain Professionals such as academic degrees to formal course work, conferences and informal learning opportunities situated in practice.

Key Words: *Professional Development principles and Programs for professional Development, workshops and conferences online PD courses, action research, mentorship programs peer coaching, lesson study groups, book club self directed learning ,micro learning*

INTRODUCTION:

Professional Development is designed to elevate your teaching practice and ultimately, drive student outcomes PD empowers you to engage in self reflection critically analyze your teaching methods and strategies to identify areas for improvement. PD is a systematic process that strengthens how Professionals obtain and retain knowledge skills and attitudes.

Throughout a teachers career includes Staying current with effective best practices, addressing the changing landscape of the needs of students, families and communities, being informed about policies and statues that govern the work of educators and adapting to evolving Professional responsibilities such as increasing the use of technology tools in the class rooms.

MEANING OF PD

Professional Development is defined as "the process of improving staff skills and competencies needed to produce outstanding educational result for students (hassel,1999)

One constant finding in the research literature is that notable improvements in education almost never take place in the absence of Professional Development. Professional Development is key to meeting today's educational demands. Thomas guskey (2000)

Form Wikipedia the free encyclopedia " a profession is a vocation founded upon specialized educational training , the purpose of which is to supply disinterested counsel and service to others for a direct and definite compensation wholly apart from expectation of others business gain".

BENEFITES OF PD INCLUDE :

- PD expands your knowledge base.
- PD boosts confidence and credibility
- PD increase earning potential and hire ability
- PD provide networking opportunities
- PD keeps professionals current on industry trends
- Teachers learn to teach better
- Teacher feel professionally supported
- Teachers model being a student

PRINCIPLES OF EFFECTIVE PD

- The duration of PD must be significant and ongoing to allow time for teachers to learn a new strategy and grapple with implementation problem
- There must be support for a teacher during the implementation stage that addresses the specific challenges of changing class room practice .
- Teachers initial exposure to a concept should not be passive, but rather should engage teachers through varied approaches so they can participate actively in making sense of a new practice
- Modeling has been found to be a highly effective way to introduce a new concept help teachers understand a new practice
- The content presented to teachers' should not be generic but instead grounded in the teachers' discipline. Types of professional development for teachers .

Types of Professional Development for Teachers

Formal Teacher Professional

Informal Teacher Professional Development

Workshop and conferences

Peer coaching

Online professional

Lesson study

University –level CPD training for

Book clubs

Job –Embedded

Self –Directed Learning

Action Research

Communities of practice

Educational Leadership

Social Media and Online Communities

Mentorship Programs

Micro learning

Reflective practice

- **WORKSHOP AND CONFERENCE** :Attend focused sessions on specific topics like integrating technology ,differentiated instruction ,or curriculum implementation
- **JOB –EMBLEDDED PD**: Integrate Professional learning directly into the classroom context. This allows you to apply new strategies and receive feedback in real –time.
- **Action research**: Engage in systematic inquiry into your own practice ,identifying areas for improvement ,implementing interventions ,and evaluation their impact on student learning.
- **EDUCATIONAL LAEDERSHIP PROGRAMS:** Designed for aspiring school leaders ,these teacher professional development courses provide training in instruction leadership ,management ,and organizational development ,preparing you for administrative roles.
- **MANTORSHIP PROGRAMS :** pairing novice teachers with experienced mentors provides personalized guidance and support ,facilitating the transfer of knowledge and skills from second educators to newcomers.
- **SOCIAL MEDIA AND ONLENE COMMUNITIES:** Join platforms like insta gram , linkedln ,and educational blogs that offer opportunities for educators to connect ,share ideas ,and participate in virtual PD sessions.

- **MICROLEARNING:** learn via bite –sized learning modules ,podcasts ,and videos that allow you to access quick focused professional development on the –go

- **REFLECTION PRACTICE:** Engage in regular self –reflection and journaling to assess your teaching practices ,set goals for improvement ,and track your progress over time.

5 STEP PROCESS TO CHOSE THE RIGHT TEACHER PROFESSIONAL DEVELOPMENT PATH FOR YOURSELF
STEP-1: SELF –DISCOVERY –IDENTIFYING YOUR NEEDS AND GOAL

Every successful PD journey begins with introspection. Grab a pen and paper, or turn up your favorite journaling app ,and sit for a self –reflective session. Here's what to focus on

- **STRENGTHS & WEAKNESSES:** Honestly Assess your current teaching skills and identify areas where you excel and those that require classroom management ,subject matter knowledge ,integration technology ,or catering to diverse learning stales.
- **STUDENT NEEDS:** Shift your focus to your students. Are there specific learning gaps you've observed ? is there a particular content area where a more tailored approach is needed ? Identifying your student's needs will help you prioritize relevant PD opportunities.
- **SMART GOALS:** Once you have clearer picture ,translate your insights into SMART goals (Specific ,measurable ,Achievable ,Relevant ,and Time-Bound).For instance ,a goal might bi:"To improve student engagement in science lessons by incorporating

technology –based simulations by the end of the semester ".These focused goal will act as a compass guiding you towards the most impactful PD experiences.

STEP 2 : FINDING YOUR PERFECT FIT MATCHING OPPORTUNITIES TO YOUR GOALS

- **SCHOOL & DISTRICT RESOURCES:** Many schools and districts offer in –house PD programs ,workshops ,and mentoring opportunities .Explore what's available within your immediate network .Don't hesitate to speak with your department head or school principal for recommendations.
- **SUBJECT AREA ASSOCIATION :** Professional organizations dedicated to your specific teaching area are a treasure trove of PD opportunities. They often hold conferences ,online courses ,and develop resources specifically tailored to the unique needs of educators in your field.
- **THE POWER OF INTERNET:** The internet offers a wealth of resources ,from educational blogs and webinars to comprehensive online professional development courses provided by universities and educational institutions .Leverage the power of the web to find relevant and convenient learning opportunities that fit your schedule.

STEP 3: PRIORITIZATION & INFORMED CHOICES –MAKING THE SMART INVESTMENT

- **ALIGNMENT WITH GOALS:** Dose the PD program directly address your identified needs and SMART goals?
- **CREDIBILITY &REPUTATION:** Research the facilitators or sponsoring organizations to ensure the content is high-quality and grounded in educational best practices.
- **LEARNING FORMAT :**Consider your preferred learning style .Do you thrive in interactive workshops with opportunities for collaboration ,or do you prefer the flexibility and self –paced nature of online professional development courses?
- **COST & TIME COMMITMENT:** Be realistic about your budget and time constraints .Many free or low –cost PD options exist alongside high-quality premium programs .choose opportunities that offer strong return on investment for your time and resources.

STEP4 : ACTIVE PARTICIPATION & REFLECTION –MAXIMIZING YOUR LEARNING

- **SET CLEAR EXPECTATIONS :** before participating ,establish specific learning objectives for yourself. What specific knowledge or skills do you hope to gain ?
- **SET CLEAR EXPECTATIONS:** Before participating ,establish specific learning objectives for yourself .what specific knowledge or skills do you hope to gain ?

- **ACTIVE ENGAGEMENT :** Don't be a passive observer! Ask questions ,participate in discussions ,and take detailed notes to solidify your learning.

- **CONNECTING THE DOTS :**Continuously reflect on how the new knowledge and skills you're acquiring can be applied to your own classroom practice .Consider how these learning can benefit your student and address the challenges you identified in step-1
- **ACTION PLAN & FOLLOW –THROUGH :**create a concrete plan for implementing what you've learned .set a timeline ,identify resources you might need (materials ,technology ,etc)and establish a system for monitoring your progress.

STEP-5 : CONTINUOUS GROWTH –CULTIVATING A LIFELONG LEARNING MINDSET

- **SCHEDULE TIME FOR REFLECTION:** regularly reflect on your teaching practice, student progress, and areas for growth .Use these insights to identify your next PD goals.
- **STAY CONNECTED WITH COLLEAGUES:** build a professional learning network (PLN) to share ideas ,learn from others ,and stay inspired.
- **EMBRACE EXPERIMENTATION:** view your classroom as a laboratory for learning experiment with new strategies gleaned from PD and assess their impact on your student.
- **CELEBRATE GROWTH:** Acknowledge and celebrate your progress ,no matter how small. Reflect on how PD has transformed your teaching and benefited your students.
- **STAY CURRENT WITH TRENDS :** Dedicate time to staying abreast of current educational research and best practices .This ensures your teaching remains relevant and responsive to student needs.

PROFESSIONAL ETHICS FOR TEACHER

Like the legal eagles and medicos , lakhs of teachers should also be bound by a stringent code of ethics in a bid to instill professionalism among them. Teaching creates all other professions ,It is universally felt that like all other professions ,the teaching profession should also have its own Code of professional Ethics which indeed is a pre-requisite to ensure its dignity and integrity.It is also significant that the right of Children to free and compulsory Education Act,2009 entrusts teachers with some onerous professional responsibilities to be internalized by them in the performance of their duties .Accordingly ,it is considered necessary that the code of professional Ethics be evolved and adopted by the teaching community.

WHY ETHICS FOR A NOBLE PROFESSION –TEACHING

- Great impact in the molding of the next generation
- Teacher works as a Friend ,Philosopher and Guide
- Imbalance between past ,present and future
- To enjoy respect and status in the society
- To commensurate ethical and cultural values in India
- Perplexed with new development and cultural heritage
- It's no longer a service but an occupation with unclear roles vision and mission
- Paradigm shift in the perception of teachers

- Erosion in the values ,responsibilities ,commitment in this profession
- Rewarding opportunities in other sectors

PRINCIPLES OF PROFESSIONAL EHTICS

- TEACHER AS A GUIDE
- Deal justly and impartially with students
- Recognize the Individual differences among students
- Seek to meet their individual needs
- Respect the right of every student
- Encourage student to formulate and work
- Accept no remuneration for tutoring
- Aid students to develop an understanding and appreciation

HAVING CO-OPERATIVE RELATIONSHIPS

- Keep parents informed about the progress of their children
- Respect the basic responsibility of the parents for their children.
- Seek to establish friendly and cooperative relationships with the home
- Help to increase the student's confidence like in his own home
- Provide parents with the information that will serve the best interest of their children

HAVING GOOD INTER-PERSONAL SKILLS

- Reasonable pattern of behavior accepted by the community
- Perform the duties of citizenship
- Participate in community activities
- Be loyal to the school system
- Work to improve education in the community
- Discuss controversial issues from an objective point view

OBLIGATIONS OF TEACHERS

- Having obligations with respect to Employment
- Conduct Professional Ethics through the proper channels
- Keep confidential official information
- Cooperate in the development of school policies
- Apply for employment on the basis of competence
- Seek employment in a professional manner
- Refuse unprofessional activity
- Give an expect due notice leaving job
- Maintaining professional level of service

Having obligations with respect to Maintaining Quality Professional Relationships

- Make the teaching profession so attractive in ideals
- Seek to make professional growth
- Maintain active membership in professional organizations
- Speak constructively of other teachers, but report honestly to responsible persons

Obligations towards students

➢ Treats all students with love and affection.
➢ Just and impartial to all students
➢ Helps Students 'in physical ,Intellectual ,Emotional ,and Moral Development.
➢ Respects basic human dignity of the child
➢ Systematic efforts to actualize students potential and talent.
➢ Transacts the curriculum in conformity with the values enshrined in the Constitution of India.
➢ Adapts his/her secrects of the information concerning students
➢ Teacher as a role model.

Obligations towards the Profession and colleagues

• Continuous effort for professional development.
• Creates a culture that encourages purposeful collaboration and dialogue among colleagues and stakeholders.
• Takes pride in the teaching profession And treats other members of the profession with respect and dignity.
• Refrains from engaging in private teaching activity
• Refrains from accepting any gift ,or favour that might appear to influence professional decisions or actions.
• Refrains from making untested allegations against colleagues or higher authorities.
• Avoids making unpleasant statements about colleagues ,especially in the presence of student ,other teachers ,officials or parents.
• Respects the professional standing and opinions of his/her colleagues.

Obligations towards Parents, community and society

• Establishes trust with parents/guardians in the interest of all round development of students.
• Resists from doing any thing which is harmful for child or his/her parents/guardians.
• Develop respect for the composite culture of India among students.
• Keep the country uppermost in mind
• Avoid taking part in such activities as many spread feelings of hatred among different communities ,religious or linguistic groups.

CONCLUSION:

Teaching competency refers to the set of abilities and capabilities values & beliefs ,attitude and temper and knowledge and skills that a teacher possesses towards teaching.

The professional development of teachers has received a great deal of attentation in all countries ,including idea the volume of professional and research literature on in series education and professional development is also considerable in comparison , the attention that teacher education has received is marginal even when research and policy initiatives are directed towards teacher education the focus is on curriculum reform , programe structure , institutional development instructional resources ,and like

each profession has its own culture derived from the role of its practioners and the expectations the society at large has with respect to the professional service.

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INCLUSIVE EDUCATION: PRINCIPLES, PRACTICES, AND CHALLENGES

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Abstract

Inclusive education is a transformative approach that seeks to provide equitable access to education for all learners, regardless of their abilities, socio-economic background, gender, race, or other individual characteristics. It aims to dismantle barriers to learning and participation while fostering diversity and inclusion in educational settings. By prioritizing diversity and equity, inclusive education challenges the traditional models of segregation and special education, promoting the idea that all children have a right to learn together. Despite growing global support for inclusive education, its implementation faces challenges, including limited resources, inadequate teacher training, and resistance to change. This article explores the principles and practices of inclusive education, discusses its benefits, and examines the barriers and potential solutions to ensure its successful integration into mainstream education systems worldwide. Moreover, it examines the barriers that hinder full inclusion, including systemic inequities, lack of resources, and insufficient teacher training, and offers recommendations for overcoming these challenges.

Keywords: Inclusive Education, Equity, Diversity, Special Education, Accessibility, Universal Design for Learning, Education Policy, Pedagogy.

INTRODUCTION

Inclusive education has emerged as a significant global priority, reflecting a shift in educational philosophy from segregating students with diverse learning needs to promoting their full participation in mainstream educational settings. Rooted in the belief that every student has the right to an education in a supportive, accessible, and non-discriminatory environment, inclusive education fosters a sense of belonging and values diversity in the classroom.

The concept of inclusive education gained momentum after the 1994 Salamanca Statement, which emphasized the right of all children, particularly those with disabilities, to education within the regular education system. The subsequent ratification of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) further reinforced the need to make education systems inclusive and equitable for all.

This article will examine the foundational principles of inclusive education, the practices that make it effective, and the key challenges to its implementation. Additionally, it will explore strategies to overcome these barriers and advance the goal of inclusion in educational settings.

PRINCIPLES OF INCLUSIVE EDUCATION

Inclusive education is guided by several core principles that inform its practices and objectives:

Equity and Access

At the heart of inclusive education is the principle of **equity**—the belief that all learners, regardless of their abilities or backgrounds, should have equal access to education. This includes access to learning materials, resources, and opportunities to engage meaningfully in the educational experience. Equity in education requires addressing systemic barriers, such as discriminatory policies, inadequate infrastructure, or social stigmas, to ensure all students can participate fully.

Diversity as a Strength

Inclusive education celebrates **diversity** as a valuable asset in the learning process. Rather than viewing differences in ability, language, or culture as obstacles, inclusive education embraces these differences, creating a richer and more dynamic learning environment. This approach fosters mutual respect and understanding among students, promoting social cohesion and reducing discrimination.

Universal Design for Learning (UDL)

A key framework for implementing inclusive education is the concept of **Universal Design for Learning (UDL)**. UDL emphasizes flexible teaching methods and assessments that accommodate diverse learning styles and needs. By designing curriculum and learning activities that are accessible to all students from the outset, UDL minimizes the need for accommodations or modifications later on. This proactive approach supports the principle that all students, including those with disabilities, can succeed when provided with appropriate opportunities and tools.

Whole-School Approach

Effective inclusion requires a **whole-school approach**, where the entire school community—teachers, administrators, support staff, students, and parents—works collaboratively to create an inclusive culture. This involves rethinking traditional roles, teaching practices, and school policies to ensure that inclusion is integrated into every aspect of school life. Schools must cultivate an ethos of inclusion, where all members are responsible for ensuring that students feel valued and supported.

PRACTICES FOR EFFECTIVE INCLUSIVE EDUCATION

To realize the goals of inclusive education, certain practices and strategies are critical. These practices help to ensure that inclusive education is more than a theoretical concept and is actively implemented in schools.

Differentiated Instruction

Differentiated instruction involves tailoring teaching methods and materials to meet the diverse needs of students. This practice is essential in inclusive classrooms, where students may have varying abilities, learning styles, and interests. Teachers may modify lesson content, use a range of instructional strategies, or offer different ways for students to demonstrate their understanding. Differentiated instruction ensures that all learners are engaged and challenged appropriately.

Collaborative Teaching

Collaborative teaching is a practice where general education teachers work closely with special education teachers, counselors, or other specialists to co-plan and co-deliver lessons. This model ensures that students with diverse learning needs receive the support they require without being segregated from their peers. Co-teaching fosters a more inclusive learning environment by providing both expertise in subject matter and knowledge of specialized instructional strategies.

Peer Support and Cooperative Learning

Peer support and **cooperative learning** strategies encourage students to work together in small groups, allowing them to learn from each other. This approach benefits both students with disabilities and their non-disabled peers, as it promotes social interaction, empathy, and teamwork. Assigning students to mixed-ability groups helps to break down barriers and encourages all students to contribute according to their strengths.

Assistive Technology

Assistive technology plays a crucial role in supporting students with disabilities in inclusive classrooms. These tools can range from screen readers and speech recognition software to alternative input devices or communication boards. Assistive technologies help students access the curriculum, communicate effectively, and engage in learning activities alongside their peers. Schools that invest in appropriate technologies can significantly enhance the participation and achievement of students with special educational needs.

Inclusive Curriculum

An **inclusive curriculum** reflects the diversity of the student body and promotes equity. This means that the content should be relevant to students of different backgrounds, cultures, and abilities. Incorporating diverse perspectives and learning materials ensures that all students see themselves reflected in the curriculum and feel valued. Additionally, the curriculum should be flexible, offering multiple means of engagement, representation, and expression to accommodate various learning preferences.

CHALLENGES TO INCLUSIVE EDUCATION

Despite its many benefits, inclusive education faces several challenges that hinder its full implementation. These challenges vary across regions and contexts but are often related to systemic issues in policy, practice, and perception.

Resource Limitations

One of the most significant challenges to implementing inclusive education is the lack of resources. Schools often struggle with inadequate funding, which limits their ability to hire specialized staff, provide teacher training, or invest in assistive technologies. Additionally, many schools lack the infrastructure—such as accessible buildings, classrooms, and materials—needed to accommodate students with disabilities. Resource constraints can make it difficult for schools to fully support the diverse needs of all learners.

Teacher Preparation and Professional Development

Inclusive education requires that teachers be well-prepared to meet the diverse needs of their students. However, many educators feel unprepared to work in inclusive settings, citing a lack of training in differentiated instruction, disability awareness, and classroom management for diverse learners. Professional development opportunities focused on inclusive practices are often limited, leaving teachers without the tools and confidence they need to implement inclusion effectively.

Attitudinal Barriers

Negative attitudes toward inclusion remain a significant barrier to its implementation. Some educators, parents, and even students may hold prejudices or misconceptions about the abilities of students with disabilities or other diverse learners. These attitudes can result in lower expectations, exclusion from certain activities, or a reluctance to invest in inclusive practices. Overcoming these barriers requires a cultural shift in how we view diversity and the potential of all students.

Resistance to Change

Education systems are often resistant to change, particularly when it involves restructuring traditional models of teaching and learning. Implementing inclusive education requires a shift away

from segregated classrooms and specialized instruction to more collaborative, flexible models. This transition can be challenging for schools accustomed to traditional methods of instruction, as it involves changes in policies, practices, and mindsets.

STRATEGIES FOR OVERCOMING CHALLENGES

To overcome the barriers to inclusive education, a multi-faceted approach is needed, involving policy changes, increased investment, and community engagement.

Policy and Legislative Support

Governments play a critical role in promoting inclusive education through the development and enforcement of policies that mandate inclusion. Policies should be aligned with international frameworks, such as the UNCRPD, and should allocate adequate funding for inclusive practices. Legislative frameworks can also ensure that schools are held accountable for providing equitable access to education for all students.

Investing in Teacher Training

Teacher training is essential to the success of inclusive education. Governments and educational institutions must invest in comprehensive professional development programs that focus on inclusive pedagogies, classroom management, and the use of assistive technologies. Teachers must also be provided with ongoing support, such as mentorship programs or collaborative learning communities, to help them refine their inclusive teaching practices.

Community Engagement and Awareness

Building a culture of inclusion requires the active participation of the entire school community. Schools should engage with parents, students, and community stakeholders to raise awareness about the benefits of inclusion and to challenge stereotypes and misconceptions. Schools can also involve parents and students in decision-making processes, ensuring that their voices are heard and that their needs are considered.

Monitoring and Evaluation

Regular monitoring and evaluation of inclusive education practices are necessary to ensure that they are effective and equitable. Schools should collect data on student outcomes, access to resources, and teacher preparedness to identify areas for improvement. Additionally, feedback from students and parents can provide valuable insights into the success of inclusive education efforts and inform future policies and practices.

CONCLUSION

Inclusive education is a powerful framework that promotes equity, social justice, and diversity in education. When implemented effectively, it creates environments where all students can learn and grow together, preparing them for life in a diverse world. However, significant barriers—such as resource constraints, lack of teacher training, and attitudinal challenges—must be addressed to ensure that inclusive education is successful. By investing in inclusive policies, teacher training, and flexible curricula, educational systems can move closer to achieving the goal of inclusive, equitable education for all.

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REFLECTIVE PRACTICE IN TEACHING

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Abstract

Reflective practice is a systematic approach to self -analysis and learning, enabling individuals to critically evaluate their experiences. And improve future outcomes. Several models such as Kolbs' experiential learning cycle, Gibbs' reflective cycle, Schon's reflective cycle guide reflective practice, providing structured frameworks. By integrated structured models and strategies, practitioners can deepen their understanding, adopt to complexities and enhance their professional effectiveness

Keywords: *reflection, critical thinking, self awareness, learning, evaluation, experience, insight, professional growth, feedback, adaptability, self- assessment, continuous improvement.*

INTRODUCTION:

Reflective practice is a method of self assessment and learning that involves examining and analyzing one's experiences, thoughts and actions. This process is widely used in personal and professional development, especially in fields such as health care, education and social work, where understanding the impact of one's actions on others is crucial. In reflective practice, individuals pause to critically assess past experiences, exploring what happened, why it happened and how it could be improved. This process encourages a deeper understanding of one's behavior decisions and values leading to continuous personal and professional growth. By recognizing areas for improvement and strengths to build upon, reflective practice enables practitioners to adopt, refine and ultimately enhance their performance in future situations.

So, reflective practice is purposeful reflection at the heart of a structured cycle of self observation and self evaluation for continuous learning it is central to effective continuing professional development and becoming a more highly skilled teacher.

REFLECTIVE PRACTICE:

Reflective practice is learning through experience towards gaining new insights of self and practice.

DEFINITIONS:

According to **Reid**, "After analyzing and evaluating we develop the theoretical aspects in practice. This practice is being done for the better future. Such process is known as reflection".

According to **Schon**, "Reflective practice is the ability to reflect on action in order to keep the learning process in cycle".

According to **John Dewey**, "Reflection is more than merely thinking or musing. Reflection is not simple but complex in nature. It is planned and brainy activity that flourishes learning from experience".
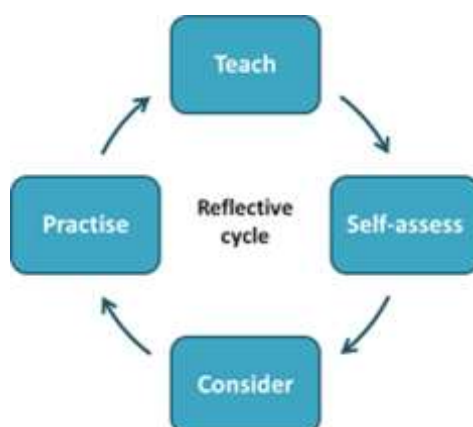
BENEFITS OF REFLECTIVE PRACTICE IN TEACHING:

Reflective practice in teaching is a powerful tool for personal and professional growth. The main aims of Reflective practice are as follows:

1. **Improving teaching effectiveness:** Reflective practice allows educators to evaluate the teaching methods, lesson planning and classroom management. By identifying what works and what does not, teachers can adjust their strategies to enhance student engagement, learning and overall teaching effectiveness.

2. **Enhancing student learning:** Teachers can better understand their student's needs, learning styles and challenges through reflection. This insight enables educators to tailor their instruction to better support student progress, ultimately promoting more successful learning outcomes.

3. **Developing self awareness and professional growth:** Reflective helps teachers recognizes their strengths m, biases and areas for growth. Their self awareness contributes to ongoing professional development, as teachers can set goals and seek out resources or training to enhance their skills.

4. **Encouraging adoptability and innovation:**   Through Reflective practices, teachers are encouraged to experiment with new ideas adopt to changing classroom dynamics and stay open to different teaching techniques. This flexibility fosters creativity and keeps teaching practices current and responsive.

5. **Building empathy and understanding for student perspectives:** Reflective practice helps teachers considers their impact on students, encouraging empathy and a deeper understanding of students background and needs. This perspective fosters a supportive and inclusive learning environment.

6. **Contributing to the broader educational community:** When teachers engage in Reflective practice, they are often better equipped to share insights, collaborate with colleagues and contribute to the professional community. This sharing helps to promote a culture of continuous improvement in the school.

7. **Strengthened classroom management:** By reflecting on classroom management to the diverse needs of the students that helps to develop the ability and modify the methods and approach.

8. **Improved assessment practices:** It prompts you to critically examine your assignment methods and their alignment with learning objectives. It involves reflecting on the validity, reliability and fairness of assessments and the quality of feedback provided to the students.

MODELS OF REFLECTIVE PRACTICE
KOLBS' REFLECTIVE CYCLE:
Kolb's reflective model is referred to as "experiential learning". The basis for this model is our own experience, which is then reviewed, analysed and evaluated systematically in three stages. Once this process has been undergone completely, the new experiences will form the starting point for another cycle.
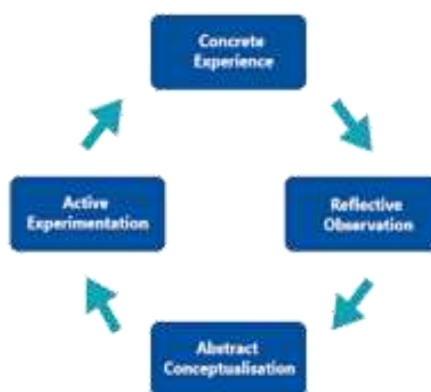
Four Stages of Kolb's reflective cycle:
1. **Concrete experience:** In this stage, the teacher recalls a specific teaching event or situation. This could be a lesson, a classroom management challenge a positive interaction with students or an activity that did not go as planned. The teacher focuses on recalling the actual experience as accurately as possible.
   Example: The teacher conducts the lesson, engages students with examples and observes their challenges with understanding.
2. **Reflective observation:** In this phase, the teacher examines their feelings, thoughts and observations from the experience. It involves considering what aspects of the lesson where effective, what challenges emerged and how students responded. Reflecting in this stage helps to identify key points of success or areas needing improvement.
   Example: After ward, the teacher reflects on what went well and what did not noting student confusion during certain parts.
3. **Abstract conceptualization:** The teacher draws insights and theories from the experience. This may involves analyzing the lesson in light of educational theory, pedagogical principles or student needs. The goal is to make sense of the experience and conceptualize ways to address similar situations more effectively in the future.

Example: The teacher reviews theories and strategies and teaching fraction, considering using more visual aids and hands on manipulatives.

4. **Active experimentation:** The final stage involves applying insights from the reflection to plan for future lessons. The teacher considers adjustments to teaching strategies, lesson plans or classroom management techniques. This proactive planning makes it possible to implement approaches and evaluate their effectiveness in subsequent experiences.

Example: In the next lesson, the teacher implements this new tools and observes if student understanding improves.

GIBBS' REFLECTIVE CYCLE:

Gibb's reflective cycle is a popular model of reflection, acting as a structured method to enable individuals to think systematically about the experiences they had during a specific situation.

Eight Steps of Gibb's reflective cycle:

1. Description:

In this stage the individual describes the event or experience in detail, without analyzing it. The goal is to provide an objective account of what occurred, who was involved and the sequence of events. This helps to set the context for deeper reflection in the later stages.

Example: a teacher might describe a classroom incident where a lesson   on a complex topic did not go as planned, with students appearing disengaged or confuses.

2. Feelings:

The individual explores their emotions and thoughts at different points during the experience. This stage is important for understanding the impact of the experience on oneself and can reveal personal biases, assumption and emotional responses that may influence future actions.

Example: The teacher might recognize feeling frustrated, anxious or disappointed when students struggled or did not engage with the material.

3. Evaluation:

In this stage the individual assesses what went well and what did not considering the positive and negative aspects of the experience. This helps to identify strengths and weaknesses in their actions or decisions.

Example: the teacher might note that some students grasped the initial concept but became lost as the lesson progressed, which may indicate that the pacing was too fast or that there was not enough time for questions.

4. **Analysis:**

The individual delves deeper to understand why things happened the way they did. This stage involves analyzing the experience in light of relevant theories, frameworks or previous knowledge. The goal is to make connections between actions and outcomes, identifying factors that contributed to the success or failure of the experience. **Example:** the teacher might realize that the lesson lacked differentiation or adequate scaffolding to support diverse student needs. Educational theories on differentiated instruction or Vygotsky's zone of proximal development may help clarify why some students struggled.

5. **Conclusion:**

Based on the analysis, the individual considers alternative actions or responses they could have taken. This stage encourages critical thinking about what might be improved in similar situations and acknowledges the limitations of previous actions.

Example: the teacher might include that incorporating more interactive activities or breaking down the lesson into smaller steps could have helped students engage better and understand the topic more thoroughly.

6. **Action plan:**

The final stage involves creating a specific plan for how to handle similar situations in the future. This might include strategies to improve performance, changes to behavior's or specific skills to develop. By planning for future scenarios, the individual can turn their reflection into practical steps for growth.

Example: the teacher decides to implement strategies such as formative assessments [like quick quizzes/thumbs up/thumbs down check] throughout the lesson, allowing for real time adjustments based on student understanding.

SCHONS' REFLECTIVEPRACTITIONER MODEL :

Schons' reflective practice model is based on the idea that professionals can learn from their own actions and situations by engaging in two types of reflection.
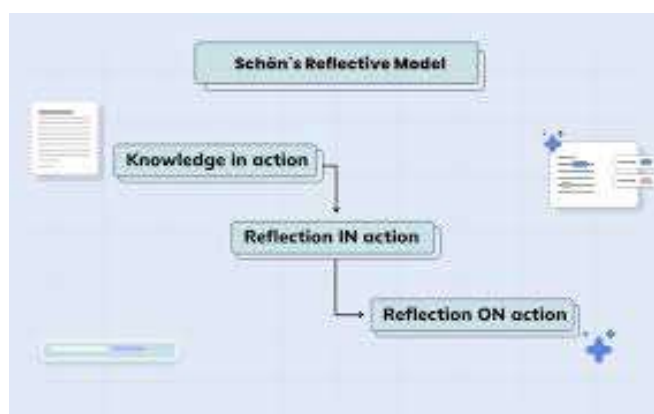
Two types of Schon's reflective practice:

Reflection in action:

Reflection in action involves analyzing and adjusting one's action while an event or activity is still happening. This "Thinking on your feet" allows the professional to recognize is something is not working as expected and to make real time adjustments.

Example: During a lesson, a teacher notices that students are confused or disengaged. Reflecting in the moment they decide to pause and try a different explanation or introduce hands on activity to reengage the students. This immediate adjustment is a form of reflection in action.

Reflection on action:

Reflection on action occurs after the experience where the individual reviews what happened and evaluates their actions and decisions. This reflection allows for a deeper analysis of what worked well and what could be improved, as well as an opportunity to plan future changes.

Example: After a challenging lesson, a teacher reflects on what happened, analyzing the factors that might have contributed to student's confusion. They might think about the pacing, teaching methods or materials used and consider alternative strategies to implement in future lessons.

BROOK FIELDS' FOUR LENSES MODEL:

It is reflective framework developed by Stephen brook field to help professional particularly educators, examine and improve their practice by looking through four different perspective or "Lenses"
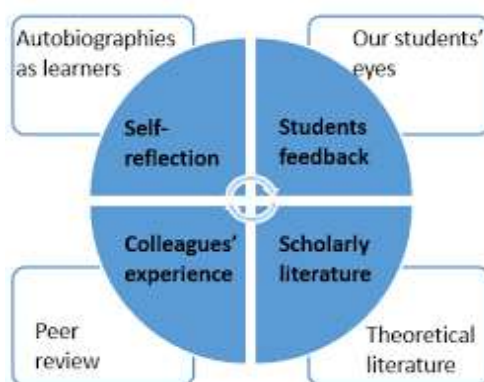
Four lenses of brook fields' model:

1. **Autobiographical lens:**

   This lens focuses on personal reflection, where practitioners critically assess their own thoughts, beliefs and experiences through this lens, individuals consider their motivations, values, strengths and areas for development. By examining their own assumptions and biases, they can identify patterns in their actions that may need adjustments.

   Example: A teacher might reflect on how their own educational experiences shape their active certain teaching methods or student behaviors, examining how personal biases may impact student interactions.

2. **The lens of student's eyes:**

   This lens involves understanding how students perceive the practitioner's actions. By gathering feedback from those impacted by their work, practitioners can see their practice through the eyes of others. This often reveal insights into aspects of their practice that may not apparent from their own perspective.

   Example: A teacher might collect anonyms feedback from students on a lesson or activity, learning that certain teaching methods or explanations were unclear, which prompts them to adjust their approach.

3. **The lens of colleague's experience:**

   Feedback and observations from colleagues or critical in gaining an objective view point collaborating with or observing peers allows educators to see difference styles and strategies while also receiving constructive criticism. This lens fosters a culture shared learning and can offer new insights into one's teaching practice.

   Example: A teacher might invite a colleague to observe their lesson who then provides constructive feedback on classroom management or student engagement techniques offering fresh ideas and strategies.

4. **The lens of theoretical literature:**

   Theory or research in education provide insights that help situate practices within larger context. By engaging with educational theory, educators can validate and refine their methods, grounding practice in evidence based strategies. This lens offers a way to stay updated on current practices research findings and innovative teaching methods.

   Example: A teacher might read literature in differentiated instruction to better support diverse learners in the classroom. Applying these theories helps them to implement new teaching strategies that better meet student's varied needs.

STRATEGIES FOR IMPLEMENTING REFELECTING PRACTICE

1. **Keep a reflective teaching journal:**
   - Regularly document thoughts on lessons, including what worked what did not and possible improvements.
   - Reflect on student engagement, understanding and reactions after each class to identify areas for refinement
   - Overtake, journals can reveal patterns, growth and areas for professional development.

2. Engage in self assessment and goal setting:
➢ Use self assessment tools to evaluate teaching practices aiming to identify specific strengths and weaknesses
➢ Set short term and long term goals based on these reflections. Goals might involve new instructional methods, classroom management techniques or specific student needs

3. Collect student feedback:
➢ Actively seek feedback from students through service, reflections or informal conversations.
➢ Encourage students to share what they find most and least helpful as well as any suggestions for improving learning experience
➢ Regularly reviewing feedback helps educators adjust teaching strategies to be more student centered

4. Engage in peer observation and feedback:
➢ Pair with other teachers to observe each others class and discuss observations afterward
➢ Focus on providing constructive, specific feedback and look for new techniques perspectives that might enhance teaching

5. Implement reflective discussion groups or communities of practice:
➢ Join or create a professional learning community with other educators for regular reflective discussions.
➢ Share experiences, challenges and successes and brainstorm solutions collaboratively.

6. Use reflective questions after lessons:
Develop a set of reflective questions to consider after each class such as –
❖ What went well? What didn't?
❖ How did I engage students and how did they respond?
❖ How could I approach this topic differently next time?

7. Review student performance and assessment:
➢ Analyze student work and assessment to see where learning gaps might exists and how teaching approaches could be adjusted
➢ Reflect on how assessment results corelate with instructional choices, adopting as needed to improve outcomes

8. Experiment where new approaches and reflect on outcomes:
➢ Try different teaching methods or classroom activities periodically to expand on established routines.
➢ Reflect afterward on what was gained and considered incorporating successful strategies into regular practice.

9. Use technology for reflection:
➢ Record lessons for self review, examining how instructions are delivered, classroom interactions and student responses.
➢ Use tools like apps for reflective journaling digital service or online peer discussions forums to facilitate reflective practices.

10. Attend workshops and professional development courses:

➤ Participate in workshops focused on reflective teaching and self assessment.

➤ Actively apply new skills and strategies from professional development sessions, reflecting on their impact on classroom practice.

CONCLUSION:

Reflective practice is an essential practice we need to hold onto. It helps us develop a deeper understanding of our work, enhance our problem-solving skills and promote continuous learning and growth. Through self assessment seeking feedback and thoughtful analysis of instructional choices, teachers gain deeper insights into their impact on student learning. This ongoing cycle of reflection allows educators to adopt methods , address challenges and refine approaches ultimately leading more meaningful and enjoying learning experiences. By committing to reflective practice, teachers not only enhance their professional development but also to a more dynamic, student centred classrooms that support diverse learning needs and promotes academic success.

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A STUDY OF ATTITUDE TOWARDS TEACHING PROFESSION AMONG SCHOOL TEACHERS IN RELATION TO FEW VARIABLES

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Abstract

The attitude of school teachers toward the teaching profession is fundamental as it openly influences their commitment, motivation as well as enthusiasm in the classroom setting. A positive attitude cultivates competence and allowing teachers to hold students successfully, adapt to varied learning desires, and bring quality teaching-learning. Moreover, teachers with a strong, positive attitude are more probable to be effective, creating a helpful learning environment that encourages student achievement. The topic recognized for the current investigation is on "A Study of Attitude towards Teaching Profession among School Teachers in relation to few Variables" Using a survey-based research methodology, this research examines the attitudes of 80 teachers selected randomly from government, private aided, and unaided government schools in Bengaluru city. The research utilizes the Attitude Scale towards Teaching Profession developed by Kulsum (2008) to identify the teachers attitude. Descriptive statistics including mean, standard deviation and also employed inferential statistic namely independent 't' technique, to compare the attitude levels based on variables like gender (male and female) and type of school management (government, private aided and unaided institutions). Data is analyzed using SPSS along with MS Excel, with the level of significance set at 0.05 confidence level. The study gives valuable suggestions into the factors shaping teachers' attitude toward their profession in teaching, offering implications for policymakers, school administrators as well as teacher training programmes seeking to increase teaching effectiveness as well as professional competence.

Keywords: Attitude, teaching profession, secondary school, teachers, education

1.   INTRODUCTION:

Teacher education plays a critical part in determining the eminence of education and the overall success of the instructive structure and a well arranged teacher is not only conversant about the subject matter although is also capable in pedagogical abilities and skills, classroom management and also student engagement. Teachers' attitudes towards their profession significantly impact their motivation, teaching practices, and the quality of education they provide. A positive attitude fosters job satisfaction, commitment, and enthusiasm, all of which are essential for creating a dynamic and supportive learning environment.

The attitude towards the teaching profession influences how teachers perceive their roles, interact with students, and adapt to diverse learning needs. Research indicates that a favorable attitude towards teaching is directly linked to teaching competence and effectiveness. Teachers with a strong professional attitude are more likely to display flexibility, creativity, and the ability to inspire and motivate students (Rajalakshmi & Saila, 2024). On the other hand, a negative or indifferent attitude can

lead to burnout, disengagement, and a lack of motivation, ultimately impacting students' learning outcomes.

2.   SIGNIFICANCE OF THE STUDY

This examination is significant since it investigates teachers' attitudes about their profession as teaching, which has a direct impact on quality of education at secondary education level and understanding the elements that influence school teachers' attitudes assists recognize opportunities for interference, professional development and formulation of policies to increase effectiveness in teaching. Since school teachers' views are prejudiced by a variety of demographic as well as institutional variables or factors namely gender and type of school management, this research sheds light on how these factors affect professional attitudes of teachers at secondary education level in Bengaluru City.

The examination's aim is to uncover differences in teachers' attitudes towards profession in teaching depending on gender and management type that is government, private aided and private unaided institutions so that teacher training programmes and educational policies focused at establishing a superior teaching environment can be developed. The present results also help school authorities and policy-makers increase teacher retention as well as job satisfaction by centering on the factors that influences teachers' professional attitude.

3.   REVIEW OF RELATED LITERATURE

3.1   Introduction

The teachers' attitude toward their profession as teaching has been a subject of interest in educational research owing to its through impact on quality of teaching as well as academic success of students. Various studies have investigated the relationship between teachers' attitudes and various factors such as job satisfaction, teaching competence as well as gender.

3.2   Studies Related to Attitude towards Teaching Profession

Kumar & Praveena (2023) examined the B.Ed. teacher trainees attitude towards creative teaching and discovered considerable differences between first as well as second year teacher trainees. Likewise, Sreelekha & Baby (2024) studied that prospective teachers' attitudes were strongly related to their competencies in teaching profession with a positive relationship between these two said factors. Rajalakshmi & Saila (2024) also focused on the relationship between teaching competence as well as attitudes of undergraduate qualified instructors and finding that teachers who had a favorable attitude toward their profession or job displayed more competence in their teaching-learning process. These results were reinforced by Sivakumar (2018), who found insignificant relationship between self-concept as well as teacher attitudes while emphasizing the necessity of a professional attitude in teaching efficacies.

3.3   Overview of Studies and Research Gap

Previous examinations and research has again and again established that teachers' attitudes influence their professional performance along with effectiveness. However, there has been slight research on the differences in views among teachers depending on institutional variable such as school management type (government, private aided and private unaided schools) and demographic variable namely gender. This examination fills a void by researching how these factors influence teachers' attitudes toward

profession in teaching, ensuing in a high thorough knowledge of the fundamentals that form professional attitudes.

4.   STATEMENT OF THE PROBLEM

The research topic identified for the present examination is on the topic entitled "A Study of Attitude towards Teaching Profession among School Teachers in relation to few Variables"

5.   OBJECTIVES

1. To compare the attitude towards teaching profession between secondary school male and female teachers.
2. To contrast the attitude of secondary school teachers towards teaching profession working in government, private aided and private unaided schools.

6.   RESEARCH HYPOTHESES

The following hypotheses formulated for the present research:

1. There is no significant difference in the Attitude towards Teaching Profession between secondary school male and female teachers.
2. There is no significant difference in the Attitude towards Teaching Profession between secondary school teachers working in government and private aided schools.
3. There is no significant difference in the Attitude towards Teaching Profession between secondary school teachers working in private aided and private unaided schools.
4. There is no significant difference in the Attitude towards Teaching Profession between secondary school teachers working in government and private unaided schools.

7.   METHODOLOGY

The topic recognized for the current investigation is on "A Study of Attitude towards Teaching Profession among School Teachers in relation to few Variables" Using a surveybased research methodology, this research examines the attitudes of 80 teachers selected randomly from government, private aided, and unaided government schools in Bengaluru city. The research utilizes the Attitude Scale towards Teaching Profession developed by Kulsum (2008) to identify the teachers attitude. Descriptive statistics including mean, standard deviation and also employed inferential statistic namely independent 't' technique, to compare the attitude levels based on variables like gender (male and female) and type of school management (government, private aided and unaided institutions). Data is analyzed using SPSS along with MS Excel, with the level of significance set at 0.05 confidence level

8.   DATA ANALYSIS AND INTERPRETATION

Table-1: 't' test results on Attitude towards Teaching Profession scores between male and female secondary school teachers.

Variable	Groups	No.	Mean Scores	Standard Deviation	't' value	Sig. level
Gender	Male	16	145.187	13.262	2.05	*
	Female	64	152.593	11.458		

*Significant at 0.05 level of significance.

The said table-1 explores the results of independent 't' test on scores of attitude towards teaching profession perceived by secondary school male and female teachers. The mean attitude scores towards of school male and female teachers towards teaching profession are 145.187 and 152.593 respectively along with their standard deviation values are 13.262 and 11.458 respectively. The obtained 't' value of 2.05 at df=78 shows which is greater than the table value of 1.99 at 0.05 level and thus it is significant at 0.05 level. Hence, the stated null hypothesis is rejected and an alternate hypothesis has been accepted that is "there is a significant difference in the Attitude towards Teaching Profession between secondary school male and female teachers." It was also confirmed that female teachers had favourable attitude towards teaching profession than other counter part that is male teachers. The comparison mean attitude scores towards teaching profession between male and female secondary school teachers are graphically presented in Fig.1.
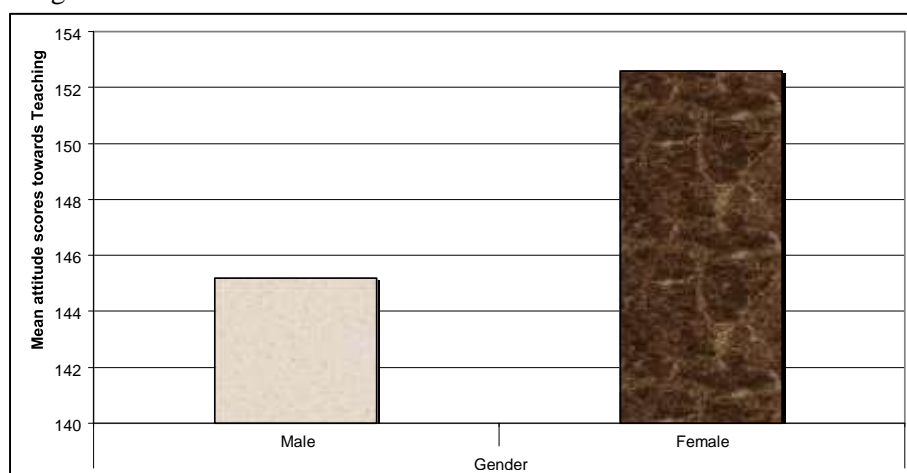
Fig.1: Bar graph shows comparison mean attitude scores towards Teaching Profession between male and female secondary school teachers.

Table-2: 't' test results on Attitude towards Teaching Profession scores among secondary school teachers working in different type of school institutions.

Variable	Groups	Nos.	Mean Scores	Standard Deviation	't' value	Sig. level
Type of Management	Government	30	151.966	9.110	3.49	*
	Private Aided	19	139.578	13.655		
	Private Aided	19	139.578	13.655	5.12	*
	Private Unaided	31	157.354	8.348		
	Government	30	151.966	9.110	2.41	*
	Private Unaided	31	157.354	8.348		

*Significant at 0.05 level of significance, (Table Value for df 47/48/59 is 2.01/2.00)

The said table-2 shows the independent 't' test results on Attitude towards Teaching Profession of secondary school teachers working in different type of school management. The mean attitude scores

of secondary school teachers towards Teaching Profession working in government, private aided and private unaided schools are 151.966, 139.578 as well as 157.354 and their standard deviation values are 9.110, 13.655 and 8.348 respectively.

The obtained 't' value of 3.49 (df=47) which is greater than the table value of 2.01 at 0.05 level and thus it is found significant at 0.05 level. Hence, the stated null hypothesis is rejected and an alternate hypothesis has been accepted that is "there is a significant difference in the Attitude towards Teaching Profession between teachers working in government and private aided schools at secondary level education."

The table also obtained 't' value of 5.12 (df=48) which is higher than the table value of 2.01 at 0.05 level and thus it is significant at 0.05 level. Hence, the stated null hypothesis is rejected and an alternate hypothesis has been accepted that is "there is a significant difference in the Attitude towards Teaching Profession between secondary school teachers working in private aided and private unaided schools."

Further, the said table shows that the obtained 't' value of 2.41 (df=59) which is greater than the table value of 2.00 at 0.05 level and thus it is significant at 0.05 level. Hence, the stated null hypothesis is rejected and an alternate hypothesis has been accepted that is "there is a significant difference in the Attitude towards Teaching Profession between secondary school teachers working in government and private unaided schools." The those teachers working in private unaided schools had favourbale attitude towards teaching profession when compared with other counter parts that is teachers working in government and private aided institutions. The similarity mean attitude scores of teachers towards their teaching profession working in different type of institutions are graphically presented in Fig.2.
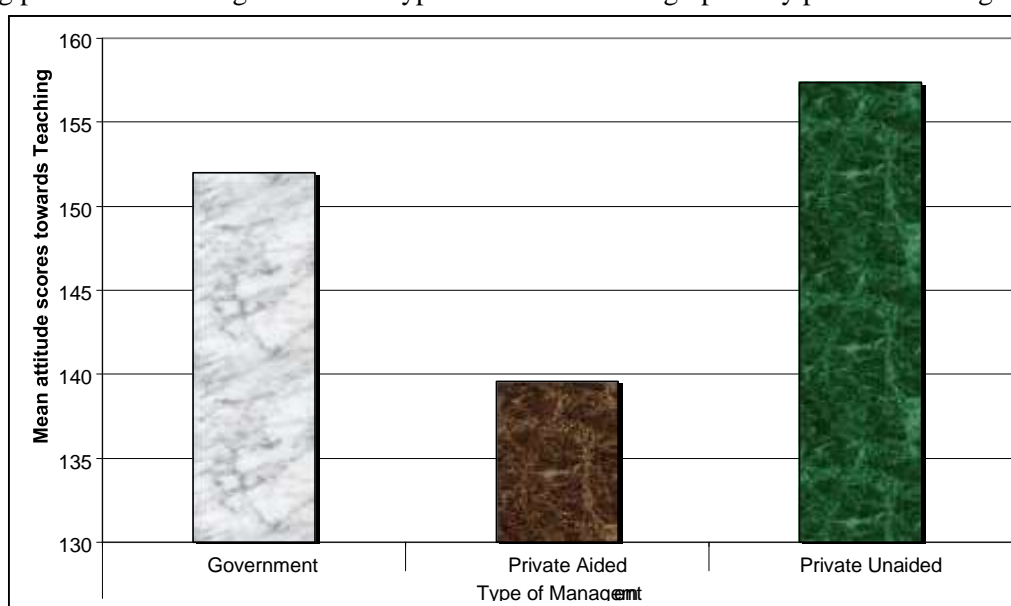
Fig.2: Bar graph shows comparison mean attitude scores towards Teaching Profession of teachers working in different type of institutions at secondary education level.

8.   FINDINGS OF THE STUDY

1. There was a significant difference in the Attitude towards Teaching Profession between secondary school male and female teachers.

2. There was a significant difference in the Attitude towards Teaching Profession between secondary school teachers working in government and private aided schools.

3. There was a significant difference in the Attitude towards Teaching Profession between secondary school teachers working in private aided and private unaided schools.

4. There was a significant difference in the Attitude towards Teaching Profession between secondary school teachers working in government and private unaided schools.

9.   DISCUSSION OF RESULTS

The study exposed extensive differences in the views of male and female school instructors working in secondary schools about their teaching profession. Female teachers had a more favorable attitude than their male counterparts, which result is reliable with the results of Dhull & Jain (2017) and Malsawmi & Renthlei (2015), who both authors confirmed that female teachers have a greater positive attitude about their teaching profession. This could be due to the view of teaching as a nurturing profession, which may demand more to female teachers.

In addition, the examination found considerable variations in attitude of teachers depending on the type of institution/management and the instructors from private unaided schools had the highest favourable opinion, followed by government school teachers, while teachers in private aided schools had the slightest favourable view. These data indicates that teachers in private unaided schools may have higher job satisfaction or a more helpful work environment, which adds to their positive sentiments and this feeling of the findings of Sivakumar (2018) and Dhull & Jain (2017), those discovered that teachers with superior job satisfaction are further expected to have a favourable attitude about their profession.

10.   CONCLUSION

The examination confirms that teachers' views regarding their teaching work are influenced by both factors that gender and management style of school. The female teachers and those working in private unaided institutions tend to have greater positive attitude regarding teaching profession and this emphasizes the necessity for focused initiatives to develop the attitudes of male teachers as well as those serving in private aided schools. Improving teachers' attitudes is important to increasing their teaching professional competence, effectiveness in teaching as well as overall job satisfaction.

11.   IMPLICATIONS

The research outcomes have numerous educational implications for teachers and policy makers. Firstly, teacher training programmes and refresh courses should include techniques to promote a favourable attitude about the job, mainly among male teachers and those serving in private aided institutions. Secondly, school authorities or school heads should prioritize building a supportive work atmosphere that increases their job satisfaction and fosters a favourable positive attitude towards their teaching profession. Finally, governments should take into account the disparities in attitudes between school management types and design legislation to declare equivalence in resources, professional development opportunities and working conditions across school types and this will helps to increase teaching quality and student output across all educational institutions at secondary education level.

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INNOVATIVE TEACHING PRACTICES AND METHODOLOGIES

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Abstract

The landscape of education is rapidly evolving, driven by technological advancements, changing student needs, and shifts in pedagogical approaches. Innovative teaching methods are approaches to teaching and learning that prioritize students and emphasize interaction and engagement in the classroom. They can help students learn more effectively. Traditional teaching methods are outdated and need to be replaced with more interactive and engaging methods. Teachers needs to be creative and innovative and they should no longer be sole source of knowledge. Instead, they should guide and mentor students, and focus on problem-based learning. Innovative teaching methods are tailored to meet the individual needs of students, and help them learn more effectively. This paper explores the future of education by examining emerging trends and innovations in teaching and learning. It discusses the impact of digital technologies, personalized learning, Virtual reality technology, Using AI in education, 3D printing, Project based learning, Personalised learning, Gamification and so on. Their characteristics and tips to implement innovative teaching practices. By embracing these trends and innovations, educators, teachers can create dynamic, engaging, and transformative learning experiences that prepare students for success in an increasingly complex and interconnected world.

Key words: Digital technologies, personalized learning, virtual reality technology, using AI in education, 3D printing, project-based learning.

Introduction

Innovative teaching is a student-centred approach to teaching that focuses on active participation and collaboration. It's a way to improve academic outcomes by addressing real problems creating an engaging learning environment. Innovative teaching is important because it can help students develop skills that will prepare them for the future and can improve the learning experience. The new technologies are introduced in almost all fields. Even teaching strategies and methodologies needs to improve. Even though the technology is overtaking all the fields and knowledge is at our finger tips, teachers play very important role in transferring knowledge. Teachers make difference in preparation of students. The innovative teaching practices helps students participate actively and involved in teaching learning process, which develop hand-on skills. By developing creativity in students through innovative teaching practices, students develop new ideas and make a positive impact on the world. Students develop the confidence to continue to adapt and tackle future challenges. Innovative teaching can also improve learning outcome. It enables teachers to monitor classes actively, gaining deeper insights into students' challenges and learning capacities. New generation are facing new challenges in this competitive world and for new challenges there must be new solutions.

Teachers are valuable human resource of our country who are creating and moulding young minds according to the society and nation's need. When the future of our nation is in teachers' hand and teacher can make difference in learners learning, it is important that teacher use improvised and innovative teaching methods and practices so that, learner have permanent impact of learning and they can use their learning in this challenging and competitive world in future. The objective of this paper is

to introduce innovative method and practices to the teaching world in which it covers characteristics, benefits, different teaching practices for better engagement of students and tips to implement.

Innovative Teaching

Innovative teaching practices don't always mean introducing the latest and greatest technology into the classroom. Instead, it is the process of proactively introducing new teaching strategies and methods into the classroom.

Innovative teaching is a collection of strategies that uses creative practices to improve the overall learning experience and performance of students. It uses modern tools, technologies and approaches to make education more engaging and effective.

Characteristics of innovative teaching practices

Flexibility and Adaptability: Adapts to the diverse learning styles and needs of students, offering flexibility in content delivery and new teaching methods.

Technology Integration: Utilizes technology creatively to enhance effective learning experiences, incorporating digital tools and resources for effective and interactive instruction.

Collaborative Learning: Emphasizes group work, collaboration, and peer learning to enhance social and communication skills among students.

Problem-Solving Emphasis: Focuses on developing critical thinking skills and problem-solving skills, challenging students to apply knowledge in real-world scenarios.

Continuous Assessment: Moves beyond traditional exams and grades by implementing continuous assessment methods, providing ongoing feedback for improvement.

Creativity Encouragement: Cultivates a learning environment that stimulates creativity and innovation, allowing students to express themselves and explore new ideas.

Individualized Learning Paths: Recognizes and accommodates the diverse learning preferences and paces of individual students, promoting personalized learning experiences.

Real-World Relevance: Connects classroom concepts to real-world applications, demonstrating the practical relevance of what students are learning.

Feedback-Oriented Approach: Prioritizes constructive feedback to guide students' progress, facilitating a continuous cycle of improvement and reflection.

Cultivation of Soft Skills: Integrates the development of soft skills, such as communication, collaboration, and time management, essential for success in various contexts.

Benefits of Innovative teaching methods

Encourage Research: Innovative approaches to education motivate students to delve into new things, utilizing various tools to broaden their horizons and foster a spirit of exploration.

Enhance Problem-Solving and Critical Thinking: Creative and effective teaching methods empower students to learn at their own pace, challenging them to brainstorm novel solutions rather than relying on pre-existing answers in textbooks.

Facilitate Incremental Learning: New teaching approaches involve breaking down information into smaller, more digestible parts, making it easier for students to grasp fundamentals while avoiding overwhelming them with a deluge of knowledge.

Cultivate Soft Skills: Integrating complex tools into classwork enables students to acquire advanced skills. Engaging in individual or group projects teaches time management, task prioritization, effective communication, collaboration, and other vital soft skills.

Assess Understanding Beyond Grades: Innovation method of teaching enables educators to monitor classes actively, gaining deeper insights into students' challenges and learning capacities beyond what traditional grades and exams may reveal.

Promote Self-Evaluation: Innovation teaching methods provided by teachers empower student learning to assess their own learning. Understanding what they have mastered and identifying areas for improvement enhances their motivation to learn specific topics.

Create Vibrant Classrooms: Innovation of teaching methods in education inject excitement into classrooms, preventing monotony. This dynamic approach encourages students to actively participate, speak up, and foster increased interaction.

Innovative Teaching practices and methodologies for Better Student Engagement

1. Interactive Lessons

Interactive lessons involve innovation methods in teaching that actively engage students in the learning process. Instead of passively receiving information, students participate in activities, discussions, and exercises that require their input and involvement. This approach aims to foster a more dynamic and engaging classroom environment. Interactive lessons can take various forms, including group discussions, hands-on activities, simulations, case studies, and collaborative projects. Teachers may use technology tools, interactive whiteboards, or other resources to facilitate participation and feedback, encouraging students to take an active role in their own learning.

2. Using Virtual Reality Technology

Virtual Reality (VR) technology creates a simulated environment that users can interact with, providing a unique and immersive learning experience. In education, VR can be used to transport students to virtual worlds that simulate historical events, scientific phenomena, or complex concepts. For example, students studying history might virtually explore ancient civilizations, while science students could conduct virtual experiments in an engaging learning environment. This technology enhances experiential learning, allowing students to visualize abstract concepts and engage with subject matter in a new way of teaching. It can be particularly beneficial in fields where hands-on experience is challenging to provide in a traditional classroom setting.

3. Using AI in Education

Artificial Intelligence (AI) in education involves the integration of AI technologies to enhance the learning experience for students and support educators. AI can be applied in various ways, such as:

- Personalized learning
- Automated assessment
- Adaptive learning platforms
- Virtual assistants
- Data analysis

Integrating AI into education aims to make learning more efficient, personalized, and adaptive to the needs of each student, ultimately enhancing the overall educational experience.

4. Blended Learning

Blended learning is an educational approach that combines traditional face-to-face instruction with online learning components. It seeks to leverage the strengths of both in-person and digital learning to create more flexible and personalized learning strategies and experience. An example of blended learning might involve students attending in-person classes for lectures and discussions while also completing online modules, interactive simulations, or collaborative projects outside of the classroom. This approach allows for a mix of teacher-led instruction, self-paced online learning, and interactive activities, catering to different learning styles and promoting student engagement.

5. 3D Printing

3D printing, also known as additive manufacturing, involves creating physical objects layer by layer based on a digital model. In education, 3D printing is utilized to bring concepts to life in a tangible and visual way. Teachers and students can design and print three-dimensional models that represent scientific structures, historical artifacts, mathematical concepts, or prototypes. This hands-on approach enhances understanding by allowing students to interact with physical representations of abstract ideas.

6. Use the Design-thinking Process

The design-thinking process is a problem-solving approach that emphasizes empathy, ideation, prototyping, and testing. It encourages a creative and collaborative mindset to address complex challenges. In education, the design-thinking process can be applied to foster critical thinking, innovation, and real-world problem-solving skills among students.

Ex: Students might be tasked with addressing a local environmental issue, such as waste reduction.

7. Project-based Learning (PBL)

Project-Based Learning is an instructional methodology that centers around students completing projects that require them to apply their knowledge and skills to real-world challenges. PBL emphasizes hands-on, collaborative learning, fostering critical thinking and problem-solving skills.

8. Inquiry-based Learning

Inquiry-Based Learning is an approach where students actively explore and investigate topics, posing questions and conducting research to construct their understanding. This method encourages curiosity, critical thinking, and a deeper engagement with the subject matter.

9. Jigsaw

The Jigsaw technique is a cooperative learning strategy where students work collaboratively to become experts on specific topics and then share their knowledge with their peers. This promotes teamwork, communication, and a sense of shared responsibility for active learning method.

10. Flipped Classroom

The flipped classroom model reverses the traditional teaching approach by delivering instructional content, such as lectures, through digital media outside of the classroom. Class time is then used for interactive activities, discussions, and application of knowledge.

11. Peer Teaching

Peer teaching involves students taking on the role of the teacher to explain concepts or assist their classmates in understanding specific topics. This approach reinforces understanding through teaching and encourages collaboration.

12. Peer Feedback

Peer feedback involves students providing constructive feedback to their peers on their work, presentations, or projects. This encourages a culture of collaboration, communication, and continuous improvement.

13. Crossover Teaching

Crossover teaching involves educators from different subjects collaborating to integrate content from multiple disciplines. This interdisciplinary approach aims to show the interconnectedness of different subjects and enhance the relevance of learning.

14. Personalized Learning

Personalized learning tailors the educational experience to the individual needs, preferences, and pace of each student. This can involve adapting content, pacing, and innovative methods of teaching to align with the unique learning styles and strengths of each learner.

15. Active Learning

Active learning involves strategies that engage students in the learning process through activities, discussions, and participation, rather than passive listening. It encourages students to think critically and apply their knowledge actively.

16. Gamification

Gamification integrates game elements into non-game contexts, such as education, to enhance engagement and motivation. Points, levels, challenges, and rewards are used to make learning more enjoyable.

17. Problem-Based Learning

Problem-Based Learning (PBL) is an instructional method where students learn through solving real-world problems. It promotes critical thinking, collaboration, and the application of knowledge to practical situations.

18. Mistake-Led Teaching

Mistake-led teaching emphasizes the value of mistakes as opportunities for learning and growth. Instead of penalizing mistakes, this approach encourages reflection, analysis, and understanding through the process of making and correcting errors.

19. Collaborative Learning

Collaborative learning involves students working together in groups to achieve shared learning goals. It promotes communication, teamwork, and the exchange of innovative ideas in education.

Tips for Implementing Innovative Teaching practices

Implementing innovative teaching strategies can be a transformative experience for both educators and students. Here are some tips to help facilitate the successful integration of innovating teaching strategies in the classroom:

- **Start with Clear Learning Objectives:**

Clearly define the learning objectives and goals you want to achieve with the innovation teaching strategy. Ensure that the chosen strategy aligns with the curriculum and educational outcomes.

- **Understand Your Students:**

Consider the needs, learning styles, and interests of your students. Tailor the innovative strategy in teaching to match the characteristics of your classroom, fostering a more personalized and engaging learning experience.

- **Create a Supportive Environment:**

Foster a positive and supportive classroom culture that encourages experimentation, creativity, and risk-taking. Establish an atmosphere where students feel comfortable exploring new concepts and expressing their ideas.

- **Provide Adequate Resources:**

Ensure that teachers and students have access to the necessary resources, including technology, materials, and training materials. Adequate resources facilitate a smooth implementation of innovating teaching strategies.

- **Encourage Collaboration:**

Promote collaboration among educators by creating opportunities for sharing insights, experiences, and best practices. Collaborative environments foster a culture of continuous improvement and innovation.

- **Seek Student Feedback:**

Regularly gather feedback from students to understand their experiences with the innovative teaching strategies. This input helps educators make necessary adjustments and tailor the strategies to better suit student needs.

- **Celebrate Successes:**

Acknowledge and celebrate the successes achieved through the implementation of innovative teaching strategies. Recognizing achievements reinforces the value of experimentation and encourages a positive attitude towards innovation.

- **Stay Informed and Updated:**

Stay informed about emerging education trends, technologies, and pedagogical approaches. Continuous learning and staying updated ensure that educators remain at the forefront of innovative teaching practices.

- **Flexibility and Adaptability:**

Be flexible and willing to adapt. Different strategies may work for different students or in varying contexts. Flexibility allows for adjustments based on ongoing assessments and feedback.

- **Encourage Continuous Professional Development:**

Support ongoing professional development for teachers, including attending workshops, conferences, and participating in online communities. Continuous learning ensures that teachers stay inspired and well-equipped to implement innovative strategy in teaching effectively.

Remember that the successful implementation of innovative teaching strategies requires a combination of planning, collaboration, and a commitment to ongoing improvement. By creating a supportive and dynamic learning environment, educators can enhance student engagement and foster a love for learning.

What Teaching Strategies Should One Avoid?

- **Over Reliance on Lectures**: Long lectures without interaction can lead to disinterest. Include discussions and activities for engagement.
- **Ignoring Student Diversity**: Adapt teaching to diverse needs, learning styles, and backgrounds for an inclusive environment.
- **Excessive Use of Worksheets:** Balance worksheets with hands-on activities and real-world applications to avoid passive learning.
- **Excessive Testing:** Balance standardized testing with other assessments like projects and presentations.
- **Ignoring Technology Integration:** Thoughtfully integrate technology to prepare students for the digital age.
- **Lack of Clear Learning Objectives:** Clearly state learning outcomes to provide direction and purpose for lessons.
- **Ignoring Student Voice:** Involve students in decision-making processes and incorporate their interests.
- **Sole Reliance on Textbooks:** Supplement textbooks with real-world examples, multimedia, and interactive activities.
- **Neglecting Social and Emotional Learning (SEL):** Incorporate SEL activities for a positive and supportive learning environment.
- **Isolationist Teaching:** Collaborate with colleagues and involve students in collaborative learning experiences.
- **Fear of Mistakes:** Embrace mistakes as learning opportunities and encourage a growth mindset.
- **Lack of Variety in Assessment:** Use a variety of assessments to capture a comprehensive view of student understanding.

Conclusion

For fostering a dynamic and successful learning atmosphere, inventive teaching techniques play a pivotal role in empowering both educators and students. They enable teachers to cultivate imaginative approaches to instruction while fostering the development of independent learning skills among students. This paper includes innovative teaching methods, strategies, tips to implement and things to avoid in innovative teaching methods which strengthens students learning. The innovative teaching methods can bring an evolutionary change in education since it vanishes rote memorization and promotes active learning in which students get hand on experience which leads long term learning. As long as we're innovating, we are growing. Give it a go, it's always an exciting time to be in the classroom. It's especially exciting now while many are looking to introduce innovative teaching strategies as solutions to the challenge students face today.

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THEME 5

THEME - 5

EFFECTIVENESS OF MUSIC INTEGRATED APPROACH TO EDUCATION: AN ANALYSIS OF TED TALKS

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I. INTRODUCTION –
'I would teach children music, physics and philosophy but most importantly music for the patterns in music and all of the arts are the keys to learning'.

-          Plato

Education is a systematic process of acquiring knowledge, skills, values, and competencies. Education is a vital component of individual and societal development, equipping people with the tools they need to thrive in an ever-changing world.

Modern methods of education are essential for fostering effective learning environments that cater to the diverse needs of today's students. Innovative teaching practices are designed to engage students, enhance learning, and adapt to the diverse needs of learners. Integrating music into education can be a powerful tool for reducing anxiety among students.

Exploration and expansion of the experiments with music and education is happening since decades. However, the potential of integrating music with education to make effective learning is still a far way ahead. Teaching is a skill that is both scientific and artistic. Integrating the art of music to teaching will be an innovative and interesting method.

Music with its power to evoke has claimed the attention of neuroscientists. Experiments with music as therapy to mental illness are progressive. Scientists and researchers are trying to establish the connections between music and academic learning and the factors supporting education like concentration, intelligence, communication, confidence etc.

National Education Policy – 2020 envisions Indian centred education system highlighting the importance of integration of performing arts like music into classroom transactions to make learning joyful and effective.

Music is the most common interest of many people which when integrated can make students smart, sharp, cooperative and empathetic. Technology, Entertainment and Design Talks popularly known as TED Talks are one of the novel genre of educational resources used by educationists, researchers, teachers and students. Present study was conducted to analyse TED Talks for the Effectiveness of Music Integrated Approach to Education.

II.   REVIEW OF LITEREATURE –
A.   Reviews related to Music Integrated Education:
a.   Schellenberg (2004) through his studies examined that music training had a boosting effect on the Intelligence Quotient. Another two studies of Schellenberg (2006, 2011) confirmed an association between IQ and the duration of music training.

b.   The results of the study conducted by Nasim Boustani and Taqi Al Abdwani (2023) showed the superiority of music integrated instruction in learning over non-music-mode instruction on short term and long term memory.

B.   Reviews related to TED talks:

The first TED Talk was in 1984 by Richard Saul Wurman, co-founded by Harry Marks. TED is dedicated to researching and sharing knowledge that matters through short talks and presentations the goal being to inform and educate global audiences in an accessible way. Since 2006, TED has grown attracting international followers that has grown into millions.

TED Talks are influential videos from expert speakers on education, business, science, tech and creativity, with subtitles in more than one hundred languages. TED is supported by advertisements and partners.

TED's mission – Discover and spread ideas that spark conversation, deepen understanding and drive meaningful change.

It is a non-profit that believes powerful ideas, powerfully presented, move us; to feel something, to think differently, to take action.TED arranges events to spread champion ideas through live events around the world.It provides TED talks, TED – Ed animations and Podcasts.It also extends business solutions, strengthening ideas through strategic partnerships.In the past year 1M + educators have used TED Ed in classrooms.

III.   METHODOLOGY –

Ten TED talks on YouTube TED channel were selected for the study following purposive sampling technique. The talks were selected based on the following criteria –

•   Talks having the connectivity between educational aspects and music.

•   Talks of duration neither too short, not too long, of about 10 – 15 minutes to get enough information.

•   Talks having closed caption of transliteration, so that misunderstanding of the pronunciation or technical terms are avoided and the content is better understood.

Each talk was watched carefully. The transliteration option was used for better understanding of the accent and the technical terms. The researcher wrote down the content of the talks for further reference and analysis.

IV.   ANALYSIS OF TED TALKS –

The TED talks were analysed qualitatively as below. The details of the numbering of TED talks are given in Annexure – 1

TED talk: 1 –

WHY SING SCIENCE? MUSIC AS AN EDUCATIONAL TOOL -

Musically communicating science through songs is uniquely effective as it has the ability to do 5 things –

a.   It can engage audience.

b.   It can familiarize the complicated language of science.

c.   It can convey meaningful understanding.

d.   It enhances memory and recall and

e.   It can bridge the perceived gap between arts and science.

The first thing for teachers is to get their students engaged, getting them to participate or to have some kind of emotional involvement. Positive emotional response is engagement. Scientific language can be a big barrier for engagement; but music has wide spread appeal as it effects emotions.

Songs, being more economical with words are good at conveying understanding. Main points are repeated over and over again in chorus making explanation clear.

Writing lyrics develops better understanding of concepts. Though time consuming, it makes students creative and insightful.

Non-literate cultures have used songs to pass knowledge from generation after generation for more than thousands of years as melody, rhythm, repetition and rhyme all improve encoding and retrieval of information.

Student engagement, student participation, language learning, memory and understanding have direct links to education.

The scientific thinking among many people is prevented by the perceived gaps between the arts and the science. This identity is important to teenagers who choose their identities in life with their academic paths.

TED talk: 2 –

WHAT IF EVERY CHILD HAD ACCESS TO MUSIC EDUCATION FROM BIRTH?

Music education is an activity that is popular since ancient days both culturally and socially. Many neuroscientists have studied people who were educated musically. They looked at the brain structures and functions of musicians. Majority of the cases have shown differences in brain function far more effectively. According to neuroscientists, musicians are the people who learnt instrumental music formally, who learnt to read music and involved in ensemble at least for 2 years.

Neuroscientists used technologies like functional Magnetic Resonating Index – fMRI, Position Emission Topography - PET to study the brains. They observed that the brains of musicians showed certain areas lighted up when participants did tasks like reading and solving math problem; but when the participants were made to listen to music, the neuroscientists saw many areas of brain lighted up. This happens as music education works on 3 areas of brain together, the motor, visual and auditory cortices. They found a larger callosum across the 2 hemispheres of the brain which allows the messages to pass to travel quickly and in creative pathways. Neuroscientists also found that the musicians had significantly developed memory system in their brains. Researches of 2 decades led to the conclusion that music education raises the general cognitive capacity of anyone who undertakes it.

In another study neuroscientists saw through fMRI of 1 – 3 days old that the babies used music processing networks to understand their mothers' voices, confirming that music and language processing are very closely connected in the brain.

A comparative study of musicians and non-musicians involving IQ points showed 7.5 IQ points more in musicians who undertook music education before the age of 7.

TED talk: 3 –

EMOTIONAL RESPONSES TO MUSIC – INDIVIDUAL OR UNIVERSAL?

Music is a ubiquitous phenomenon which brings people to right mood creating shared experiences. The four conclusions drawn from the experiments of Hauke Egermann are –

•   Emotion formations while listening are due to Learned Associations - Musical excerpts when heard, which were earlier used in a happy moment or a sad moment features to associate with happiness or sadness respectively.

•   Emotion formations based on learning termed as musical expectations – There is a possibility of singing along an unheard song when heard for the first time. This is based on the musical knowledge of the probabilities of musical patterns about the musical syntax. This knowledge creates expectations, which turn into emotions, certain segments even inducing physiological and subjective arousal.

•   Music induces emotions because of expressive emotional movement – Happiness or sadness is subjective associated with emotions. Behaviours like being active, approaching things and moving fast are associated with emotions. Happy expressions are louder, faster and higher in pitch.

•   Music is activating sound – it has a direct influence on sympathetic nervous system where it creates attention or orientation, subjective for physiological arousal.

Music creates emotions that are both individual and universal.

TED talk: 4 –

DOES MUSIC CHANGE A CHILD'S BRAIN?

Scientists have understood that music can be used as tool to understand brain and also to change it. Music is a good exercise for brains, especially for kids. Lot of growing research has shown that music can improve math skills, reading, school attendance and confidence.

World Health Organization publishes charts for standard heights and weights for kids, to plan nutrition both for individuals and society. But there are no charts to measure kids' brains. Paediatric Longitudinal Imaging Neurocognition and Genetics study, popularly known as PLING study looked at the brain growth of 200 kids of age 5 – 10 years over a period of 5 years having questions like 'Does music targets specific circuits of the brain?' The scientists partnered with San Diego Youth Symphony. The data over 2 years of time showed that there was consistent improvement among music kids than their control group.

TED talk: 5 –

FROM PERCEPTION TO PLEASURE – HOW MUSIC CHANGES THE BRAIN

Experiments are on globally to find the neural pathways, perception of sound and motor system of production of sound. A loop created between auditory cortex and motor system allows the perception and production of music. Nobel laureate Santiego Ramon predicted the idea of brain change physically and anatomically by musical training. The progressive trainings lead to formation of new pathways and nerve terminals. Though it was hypothetical, later it was proved by the experiments of Robert J Zatorre. The thickness of the cortex was found to be greater in people who received musical training compared to a control group who didn't. As the plasticity of the brain is greater in earlier ages, more changes happen if music training is started earlier.

Experiments with music listening and blood flow to brain and dopamine receptors were conducted. Both blood flow and dopamine uptake were found increased when people were enjoying pleasurable music.

TED talk: 6 –

LEARNING THROUGH MUSIC AND ART

Every person in this planet is a musical being having rhythmic breath, heartbeat, brain waves and walking to a rhythm. Brains are programmed to receive musical education. Babies learn to speak without attending speaking classes or going through series of books. It is possible to learn both language and music being immersed in specific environment, absorbing and imbibing in a natural way. Any potential in the brain that doesn't meet the right experience can be lost.

TED talk: 7 –

WHY MUSIC DESERVES AN EQUAL PLACE IN OUR SCHOOLS?

Decades of studies across disciplines have validated the place of music in human development. There are increasing studies which support the idea that music has biological roots and people are hard wired to enjoy and engage with music as they are hard wired for language. New born prefers singing to speech which is why lullabies are sung to build emotional bonds with infants.

Music performance requires sustained effort, team work, and discipline, encourages risk taking. Music students learn problem solving, think creatively and achieve higher grades on standardized tests. Through the study of music, the students catch the glimpse of other cultures and through that process they learn compassion and empathy for others. Though there are these many benefits, despite efforts, there is a disconnect between the research and the school policy. Music is placed as an afterthought in school curriculum. Musically inclined students are made less valued.

According to the national educational statistics at US, only 29 states define music or the arts as a core academic subject. Schools are busy with meeting the needs of mandated subjects like English, math and science. Now STEM education, which involves Science, Technology, Engineering and Mathematics has become a priority. Though programs like athletics are given preference in budgeting, music and arts are less valued by adults.

TED talk: 8 –
HOW SINGING TOGETHER CHANGES THE BRAIN?

Music connects to the right side of the brain which is responsible for intuition, imagination and creative functions. It connects to a world of possibilities. As the world is becoming more and more mechanized, it is important to nurture the attributes of human beings; love, compassion and kindness.

The neuroscience of singing shows that, when sung, the neurotransmitters connect in new and different ways. This allows the right temporal lobe of the brain to release endorphins, which make the singer smarter, healthier, happier and more creative. When it is a group singing, the effect is amplified. A study measured the levels of Oxytocine, the hormone responsible for pleasure, love and bonding in a group of people before and after singing sessions. The results showed the increased levels of Oxytocine after singing. Global research showed that singing benefits healing of strokes, speech abnormalities and depression. Those studies speculate that the brains developed along with music and singing as a survival mechanism. From time immemorial, the societal groups and tribes sang and danced together to build loyalty, transmit vital information and to ward off enemies.

TED talk: 9 –
HOW MUSIC CAN HEAL OUR BRAIN AND HEART?

In the first year of their life the musical distinctions will allow the infants to learn speech and language. ElectroEncephaloGram – EEG test, a brain imaging technology show that new born babies can detect the beat in music. The right hemisphere of brain is predominant for melody and left hemisphere for speech.

Music allows for exploration and creativity. It connects body and mind and performing music helps cognitive and motor skills. Neuroscientists describe how playing music stimulates the brain with intricate interrelated and astonishingly fast sequences. It activates all areas of the brain at once. Regular music practice strengthens those functions.

Music education has the potential to help children towards the deeper understanding of who they are, where they come from, the world around them and the wonderful potential they carry within themselves. In the future there is a need for creative expertise. Creativity becomes source of currency which makes one special and unique. This makes music education fundamental.

TED talk: 10 –

MUSIC AND THE BRAIN

A number of products are marketed to improve brain function. The range varies from basic cross words or Sudoku puzzles, or taking the help of brain trainers like brain age, few minutes a day etc. Some people prefer natural approach like selection of particular food that has been touted to have brain enhancing properties like blue berries for memory or foods high in Omega 3 or Docosa Hexaenoic Acid. Music fits very well to this category. Other daily activities can be carried out along with playing music on. There are many products for this purpose of enhancing brain like for adults, 'bock for the brain' or 'Mozart for your mind'. There are many products for children, for moms and for moms to be. These products claim that they can stimulate bonding, communication and learning before birth, invigorate brain growth and development in the womb.

A study conducted in 1993, gave a term called 'The Mozart Effect'. In this study, the researchers wanted to find out if listening to music composed by Mozart might actually produce better processing of spatial things so that people would do better on tests of space function after listening to Mozart. In order to test this, they played undergraduate students.

Ten minutes of a piece by Mozart or they had them listen to a relaxation tape for ten minutes or they just sat in silence for ten minutes. After the Mozart piece or silence, the students completed a few different tests designed to assess their spatial function. One of these tests that come up is the paper folding and cutting test. The test involves imagining what a piece of paper that is folded several times and had spatial manipulations made to it and then some cuts made into it will look like when it is unfolded. The group which listened to Mozart did better than those that just simply listened to a relaxation tape or sat in silence.

Music may not be the short cut to produce brainiacs or mini Einstein, but it does have powerful effects on minds and bodies. Scientists are excited to carry on investigating music as they can find other ways to tap its potential.

V. CONCLUSION

Advantages of integrating music into education are immense. Integration of music breaks the monotony of the classes. It lowers the stress levels and helps the students to relax and focus on the content.

Listening to music and analysing the lyrics of a song can improve comprehension skills. This also helps in the development of vocabulary and enhances comprehending skills, thus helping in language development. Singing words and phrases improve fluency and breath control. Rhythm and beats, repetition and articulation help to improve speech patterns. Music activates the brain's emotional and behavioural response centres.

The potential of music integration to make learning joyful, meaningful and lifelong is yet to be tapped to its fullest and hence there is scope for more experimentation and research in this regard.

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I.   APPENDIX –

Details of TED Talks used for the study -				
Sl.No.	YouTube link, date of talk and the venue	Name of the talk	Speaker	Accessed on
1	https://www.youtube.com/watch?v=Jow_h6yRaKQ May 1, 2018 @ Univeristy of Nicosia	Why Sing Science? Music as an educational tool	Mr. Jonny Berliner	01.09.2024
2	https://www.youtube.com/watch?v=ueqgenARzlE&t=10s October 28, 2014 @ Canberra	What if every child had access to music education from birth?	Anitha Collins	03.09.2024
3	https://www.youtube.com/watch?v=kzFgoaZ9-VQ&t=178s September 2, 2014 @ Ghent, Belgium	Emotional responses to music	Hauke Egermann	06.09.2024
Sl.No.	YouTube link, date of talk and the venue	Name of the talk	Speaker	Accessed on
4	https://www.youtube.com/watch?v=M2sqXbwlaWw Novermber 19, 2015 @ San Deigo	Does Music Change a Child's Brain?	John Iversen	08.09.2024
5	https://www.youtube.com/watch?v=KVX8j5s53OsApril 12, 2018 @ Montreal	From perception to pleasure: How music changes the brain	Dr. Rober Zatorre	20.09.2024
6	https://www.youtube.com/watch?v=zKZAfDcU6BQ&t=342s April 05, 2013 @ Conejo Slon - California	Learning through music and art	Doug Goodkin	24.09.2024
7	https://www.youtube.com/watch?v=MYPJpmaWcHU April 11, 2022 @ Buffalo, New York	Why music deserves an equal place in our schools?	James Burrit	30.09.2024

Sl.No.	YouTube link, date of talk and the venue	Name of the talk	Speaker	Accessed on
8	https://www.youtube.com/watch?v=I_HOBr8H9EM December 19, 2013 @ Melbourne	How singing together changes the brain?	Tania de Jong AM	01.10.2024
9	https://www.youtube.com/watch?v=NlY4yCsGKXU May 27, 2015 @ Berklee Velancia	How music can heal our brain and heart?	Kathleen M Howland	06.10.2024
10	https://www.youtube.com/watch?v=fDfVsFxJXms Apr 26, 2013 @ Western University of Health Sciences, Pomona, California	Music and the Brain	Jessica Grahan	10.10.2024

CONSTRUCTION AND STANDARDIZATION OF ACADEMIC SELF-INDISCIPLINE SCALE (ASIS) AMONG TEACHER EDUCATION STUDENTS

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Abstract

Academic self-indiscipline, characterized by poor time management and ineffective study habits, is often intertwined with academic procrastination, both of which are significant barriers to student success. This study aims to develop and validate the Academic Self-Indiscipline Scale (ASIS) to specifically measure these challenges among teacher education students, who are prone to procrastination due to weak self-regulation. The ASIS assesses two key dimensions: management skills, which include task prioritization and time allocation—areas where procrastinators typically struggle—and study habits, reflecting consistent and effective learning strategies, often lacking in procrastinators. The scale was constructed and refined through rigorous processes, including expert review, pilot testing, and item analysis, ensuring its relevance to identifying procrastination-related behaviors. Reliability was established using test-retest, split-half, and Cronbach's alpha methods, with results of 0.889 for management skills, 0.818 for study habits, and an overall reliability coefficient of 0.917, highlighting the scale's consistency. Content and item validity were confirmed through expert evaluation and statistical analysis. The final scale comprises 20 items, with a scoring system ranging from 20 to 80. This study emphasizes the importance of addressing academic self-indiscipline and procrastination to enhance academic performance and preparedness for the teaching profession. The ASIS provides a robust tool for identifying at-risk students and informing targeted interventions aimed at reducing procrastination.

Key words: *Academic Self-Indiscipline, Teacher Education, Management Skills and Study Habits.*

1. INTRODUCTION

Academic indiscipline, closely related to academic procrastination, involves a lack of self-regulation in academic pursuits, leading to difficulties in time management, inconsistent study habits, and ineffective organizational skills. These behaviors are key contributors to procrastination, where students delay or avoid tasks despite knowing the negative impact on their academic success. This study focuses on developing and validating the Academic Self-Indiscipline Scale (ASIS) to measure these specific challenges among teacher education students. The ASIS assesses two key dimensions: management skills, which involve the ability to prioritize tasks and allocate time efficiently—often problematic for procrastinators—and study habits, which reflect consistent and effective learning strategies that procrastinators tend to lack. By identifying areas where teacher education students struggle with self-discipline, this research aims to inform the development of targeted interventions to reduce procrastination, thereby enhancing academic performance and overall preparedness for the teaching profession.

2. NEED AND SIGNIFICANCE

The construction and standardization of the Academic Self-Indiscipline Scale (ASIS) is crucial due to the significant role of self-discipline in academic success and the lack of specialized tools to measure this construct among teacher education students. Academic self-indiscipline, characterized by poor management skills, ineffective study habits, and procrastination, often leads to suboptimal performance, increased stress, and last-minute efforts, which hinder overall academic success. For teacher education

students, high levels of self-discipline are especially important as they need to manage their academic workload while preparing for future professional responsibilities. Existing tools, like the Procrastination Assessment Scale for Students (PASS), are insufficient as they do not comprehensively address the full spectrum of self-discipline. The ASIS fills this gap by assessing key dimensions such as management skills and study habits, helping to identify students who struggle with self-discipline. By addressing these challenges, the scale enables the development of targeted interventions that can enhance academic performance, reduce procrastination, and better prepare students for their roles as future educators. This scale not only contributes to educational research but also supports the cultivation of a well-prepared, efficient, and effective teaching workforce.

3. RATIONALE

Teachers: Teachers need a reliable tool like ASIS to identify student struggles with time management, task prioritization, and focus. Many students face challenges with procrastination, balancing studies, and maintaining study schedules. ASIS provides insights to address these issues and helps teachers design interventions for improving classroom engagement by tackling inattentiveness and disruptive behavior.

Students: Students often struggle with academic procrastination, such as delaying tasks and neglecting study schedules. ASIS helps them recognize these habits and understand how procrastination impacts their academic progress. With this awareness, students can address root causes like poor time management and distractions.

Policy Makers: The ASIS provides valuable insights into common self-discipline challenges faced by students, such as time mismanagement, ineffective study habits, and distractions. These insights can guide policymakers in formulating effective policies that address these issues.

Parents: Parents can utilize the ASIS to gain a clearer understanding of their children's academic procrastination tendencies, such as delaying tasks and failing to adhere to study schedules. This insight allows them to identify specific challenges that contribute to procrastination in their children's academic lives.

Educational Administrators/Planners: ASIS helps administrators identify prevalent self-discipline issues related to academic procrastination, such as students delaying work until the last minute or being inattentive during class. By recognizing these challenges, administrators can design targeted interventions to foster better academic habits among students.

Educational Researchers: Researchers can employ the ASIS as a reliable tool to analyze specific self-discipline behaviors, including disorganization, procrastination, and difficulty managing study time. This validated instrument enables them to gather data on how these behaviors impact academic performance.

4. LITERATURE REVIEW

Academic self-indiscipline, marked by poor time management and ineffective study habits, significantly impacts student success. While research underscores the importance of self-discipline and effective study strategies (Ferrari et al., 1995; Steel, 2007), the specific challenges faced by teacher education students remain under-explored. Ferrari et al. (1995) and Steel (2007) emphasize the role of self-discipline in overcoming procrastination, aligning with the concept of academic self-indiscipline. Britton & Tesser (1991) and Anwar (2013) highlight the correlation between effective time management and study habits with academic achievement. To address this gap, this study proposes the Academic Self-Indiscipline Scale (ASIS) to assess these critical dimensions among teacher education students, informing targeted interventions to enhance academic performance and well-being.

5.   PROCEDURE FOLLOWED FOR DEVELOPING SCALE:

STEP 1: PLANNING THE TEST

The researcher plans to construct the Academic Self-Indiscipline Scale (ASIS) focusing on dimensions such as management skills and study habits. These dimensions were identified as core components of academic self-indiscipline based on a comprehensive review of relevant literature. Key studies by Steel (2010) on task management and Entwistle (1988) on study habits informed the scale's construct development. The ASIS aims to provide a reliable and valid measure of academic self-indiscipline to inform targeted interventions.

Scale	Dimensions
Academic Self-Indiscipline Scale (ASIS)	1. Management Skills
	2. Study Habits

The Academic Self-Indiscipline Scale (ASIS) was developed using a four-point Likert scale (Always, Often, Rarely, Never) to assess management skills and study habits. To ensure comprehensive measurement, the scale includes both positively and negatively worded items. Higher agreement with positive items indicates lower levels of self-indiscipline, while higher agreement with negative items indicates higher levels of self-indiscipline.

Scale	Type of statements	Always	Often	Rarely	Never
Academic Self-Indiscipline Scale (ASIS)	Positive Items	4	3	2	1
	Negative Items	1	2	3	4

STEP 2: PREPARATION OF THE TEST WRITING AND POOLING OF TEST ITEMS:

The investigator developed a comprehensive Academic Self-Indiscipline Scale (ASIS) comprising 28 items, systematically categorized by dimension as outlined below.

Table 1: Preliminary items for the Academic Self-Indiscipline Scale (ASIS) constructed using dimensions.

Scale	Dimensions	Part	No. of Items constructed
Academic Self-indiscipline Scale (ASIS)	Management Skills	A	19
	Study Habits	B	09
	Total Items		**28**

STEP 3: PRELIMINARY FORM OF TEST:

The Academic Self-Indiscipline Scale (ASIS) was developed using a four-point Likert format and underwent rigorous expert review. Ten experts evaluated the scale for grammatical accuracy, clarity, and student appropriateness. Following their feedback, the ASIS remained unchanged, with all 28 items retained for the pilot study.

Table 2: Dimensions and Retained Items of the Academic Self-Indiscipline Scale (ASIS)

Scale	Dimensions	Part	No. of Items Retained
Academic Self-indiscipline Scale (ASIS)	Management Skills	A	19
	Study Habits	B	09
	Total Items		**28**

STEP 4: PILOT STUDY

a) **Tryout of the Test:** The final draft of the scale was administered to 75 teacher education students in Shivamogga District. Each dimension was evaluated individually after collecting and scoring completed scale. During the pilot study, items that were identified as unstable or inconsistent were either revised or removed.

b) **Item Analysis:** The internal consistency and reliability of the scale were assessed using Cronbach's alpha. A thorough analysis of all test items ensured the reliability and validity of the scale.

Table 3: Item analysis using Cronbach's alpha method of Academic Self-Indiscipline Scale (ASIS)

Sl. No	Dimensions	Item Number	Corrected Item-Total Correction	Remarks
1.		Item No. 1	0.574	Accepted
2.		Item No. 2	0.631	Accepted
3.		Item No. 3	0.651	Accepted
4.		Item No. 4	0.576	Accepted
5.		Item No. 5	0.750	Accepted
6.		Item No. 6	0.520	Accepted
7.		Item No. 7	0.416	Accepted
8.	**Academic Self-indiscipline Scale (ASIS)**	Item No. 8	0.523	Accepted
9.		Item No. 9	0.554	Accepted
10.	Dimension: Management Skills	Item No. 10	0.609	Accepted
11.	**Example:**	Item No. 11	0.586	Accepted
12.		Item No. 12	-0.055	Rejected
13.	• I tend to postpone academic tasks even when there is enough time.	Item No. 13	0.239	Rejected
14.		Item No. 14	0.292	Rejected
15.	• I won't utilize my free time effectively at college.	Item No. 15	0.449	Accepted
16.		Item No. 16	0.455	Accepted
17.		Item No. 17	0.289	Rejected
18.		Item No. 18	0.531	Accepted
19.		Item No. 19	0.530	Accepted
20.	**Academic Self-indiscipline Scale (ASIS)**	Item No. 20	0.595	Rejected
21.		Item No. 21	0.511	Accepted
22.	Dimension: Study Habits	Item No. 22	0.706	Accepted
23.	**Example:**	Item No. 23	0.588	Accepted
24.	• I become distracted by non-academic activities while studying.	Item No. 24	0.683	Accepted
25.		Item No. 25	0.402	Rejected

26.	• I start writing my assignments at the last minute due to disorganization.	Item No. 26	0.555	Rejected
27.		Item No. 27	0.468	Accepted
28.		Item No. 28	0.457	Rejected

6. SELECTION OF ITEMS:

Items with corrected item-total correlation values exceeding 0.30 were retained to establish construct validity, aligning with de Vaus's (2004) recommendations. Although some items in the role habits dimension showed item-total correlation values above 0.30, these items were identified as positive statements. Given that procrastination is inherently a negative concept, the researchers and guide decided to remove these positive statements to maintain conceptual consistency in the scale. As a result, four positive statements were deleted from the study habits dimension. The Academic Self-Indiscipline Scale's item-total correlations ranged from 0.276 to 0.724. To target the intervention. The subsequent table outlines the final 20 items across the two dimensions of the scale.

Table 04: Distribution of Items across Dimensions in the Academic Self-Indiscipline Scale.

Scale	Dimensions	Part	No. of items retained
Academic Self-indiscipline Scale (ASIS)	Management Skills	A	15
	Study Habits	B	05

Following the pilot study, rigorous item analysis was conducted. As a result, the Academic Self-Indiscipline (ASIS) Scale was refined to include 20 items: 15 items measuring management skills and 05 items assessing study habits. This revised scale, comprising two core dimensions, was prepared for subsequent reliability and validity testing.

7. ESTABLISHING RELIABILITY

TEST – RETEST METHOD:

The reliability of the test was established using the test-retest method. Initially administered to 75 teacher education students in Shivamogga City, the test was re-administered two weeks later. The correlation coefficient between the two sets of scores was computed using Pearson's product-moment correlation for every dimension of the scale. The detailed results of the test-retest reliability are provided in Table No. 5.

SPLIT HALF METHOD

The accuracy and internal consistency of a test are what reliability refers to. Internal consistency was determined using the split-half method with a sample of 75 students in this study. The test scores were categorized into two parts: the first 50% and the last 50% of the statements. Each dimension's correlation between these two halves was determined using the Spearman-Brown prophecy formula. The detailed results of the internal consistency analysis are provided in Table No. 5.

CRONBACH'S ALPHA METHOD

The Academic Self-Indiscipline Scale was tested and yielded results of 0.889 for management skills and 0.818 for study habits. According to Cronbach's alpha, the overall reliability coefficient of the Academic Self-Indiscipline Scale was 0.917. The detailed reliability results are provided in Table No. 5.

Table 5: Different methods of Reliability Coefficients for scale

Scale	Dimensions	Test-Retest		Split half (Spearman–Brown Coefficient)		Cronbach's Alpha
		Test	Retest	I half	II half	
Academic Self-indiscipline Scale	Management Skills	0.780	0.759	0.845	0.789	0.889
	Study Habits	0.764	0.781	0.794	0.782	0.818
	Total	**0.772**	**0.770**	**0.819**	**0.785**	**0.917**

8. ESTABLISHING VALIDITY

CONTENT VALIDITY

The scale's face validity was validated because every statement focuses on its intended measure. Content validity was determined by expert analysis. The scale's content validity was evaluated by ten experts, including research guides, educational psychology experts, and senior teacher educators. The statements were accepted by them as being relevant and valuable for data collection. Modifications were made to some items according to their feedback. The experts found the test items and scoring procedures to be satisfactory, confirming that the scale was comprehensive and relevant.

ITEM VALIDITY

Item validity was assessed using Cronbach's alpha, with corrected item-total correlation values ranging from 0.276 to 0.724 for academic self-indiscipline scale. According to de Vaus (2004), correlations below 0.30 are considered weak and should be excluded from the composite score.

Table 6: Inter Scales Correlations of Academic Self-indiscipline Scale

Inter-Item Correlation Matrix		
	Management Skills	Study Habits
Management Skills	1.000	0.752
Study Habits	0.752	1.000

The scales' inter-item correlation matrix reveals significant positive correlations between management skills and study habits. For example, management skills and study habits are highly correlated (0.752), indicating that improving management skills is linked to better study habits. The interconnectedness of these internal factors in academic performance is highlighted by these correlations.

9. SCORING

The academic self-indiscipline scale is administered using a four-point response format in which respondents choose between always, often, rarely, and never. The total score on this academic Self-indiscipline scale ranges from a minimum of 20 to a maximum of 80. The scoring procedure assigns values between 1, 2, 3, and 4 for responses that are always, often, rarely, and never. It's important to note that all statements on the scale is negative because procrastination always has a negative connotation.

10. IMPLICATIONS

Teachers:

Identification of Struggles: Teachers can use ASIS to spot where students struggle with time management, disorganization, and procrastination.

Targeted Support: This allows teachers to provide targeted support, helping students balance their study time and stick to schedules.

Classroom Strategies: ASIS insights enable teachers to design strategies aimed at reducing inattentiveness and disruptive behavior, making for a more focused learning environment.

Students:

Recognize and Address Procrastination: ASIS helps students identify their procrastination habits and encourages better study habits.

Effective Time Management: Students can manage their time more effectively, prioritize tasks, and minimize delays.

Enhanced Academic Performance: These improvements collectively boost academic performance and productivity.

Policy Makers:

Data-Driven Programs: ASIS provides data to create educational programs that foster self-discipline and reduce procrastination.

Targeted Strategies: Insights from ASIS help policymakers develop strategies to improve students' time management and study habits.

Academic Outcomes: Better strategies and programs lead to improved academic outcomes.

Parents:

Collaborative Strategies: By working with teachers and their children, parents can develop strategies to combat procrastination and improve time management.

Supportive Environment: This collaboration fosters a supportive environment at home that encourages students to overcome procrastination and succeed.

Addressing Issues: Parents can help resolve poor study habits and negative self-talk.

Educational Administrators/Planners:

Workshops and Programs: ASIS supports the planning and implementation of time management workshops and study skills programs.

Enhanced Engagement: Focused strategies can enhance classroom engagement, creating a more conducive learning environment.

Effective Study Practices: Administrators can introduce strategies that help students develop effective study practices and reduce procrastination.

Educational Researchers:

Research Insights: ASIS data contributes to research exploring the relationship between academic habits and student performance.

Targeted Interventions: Researchers can develop targeted interventions to improve educational outcomes based on ASIS insights.

CONCLUSION

To conclude, the Academic Self-Indiscipline scale is created and standardized through rigorous processes, guaranteeing their reliability and validity. The scale is validated, and item analysis and expert validation confirmed their robustness in assessing self-indiscipline. The scoring system, ranging from 20 to 80, provides a comprehensive assessment framework. The scale is successful in identifying the need for intervention and capturing academic indiscipline of teacher education students as negative constructs. The ongoing validation and refinement will keep their reliability and usefulness in educational research and practice consistent.

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EFFECT OF THEATER-BASED TEACHING ON STUDENTS' ACHIEVEMENT IN KANNADA LANGUAGE AMONG IX STANDARD STUDENTS

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Abstract

Theater-based education has come out as an active and attractive instructional type that fosters deeper education through active participation, creativity and emotional commitment. In the circumstance of language learning, mainly in Kannada, theater-based approaches provide authentic, culturally related experiences that help students extend better language comprehension, critical thinking as well as communication skills. This type of method is mainly important for nurturing a more overall understanding of the language, making it a valuable tool for improving academic achievement among school students. This study involved a sample of 40 ninth-grade students, separated into two groups: an experiment group (N=20) taught using theater-based method and a controlled group (N=20) taught using traditional method of teaching. The intervention included interactive theater exercises, role-playing activities as well as discussions centered on culturally relevant narratives. A 'Randomized Matching Control Group Pre-test Post-Test' as research design was considered, with the Achievement Test in Kannada Language constructed and standardized by the researcher and consisting of 50 multiple choice items used to assess students' Kannada language achievement along with the reliability of the test was established through test - retest technique. The statistical technique independent 't' test confirmed that theater based teaching was more effective significantly than tradition method of teaching in increasing Kannada language achievement of ninth grade students. Theater-based teaching is not only increases student learning but also fosters teachers' proficient growth, positioning it as a key approach in shaping creative, adaptive as well as effective educators for the future.

Keywords: *Effectiveness, Theatre-Based Teaching, Achievement, Kannada, Language, IX Grade Students.*

1.   INTRODUCTION

Theatre-based intervention has materialized as an active and attractive instructional strategy that increases learning results through participation actively, creatively as well as engagement emotionally (Joshi, 2017). In the framework of language education, particularly in Kannada language of Karnataka, theatre-based learning offers genuine, ethnically relevant familiarities that promote deeper language comprehension, critical thinking as well as effective communication skills (Kumar, 2019). This technique supports with the National Curriculum Framework (NCF, 2005) importance on promoting experiential learning and cultural sensitivity.

Research has constantly exposed that theatre-based instruction positively impacts language learning output. Previous studies have confirmed that drama and theatre-based strategies increase language skills that is listening, speaking, reading as well as writing (Sharma, 2015; Rao, 2018). Therefore, theatre based instructions increases students' motivation, confidence as well as emotional intelligence, leading to improved academic performance (Gupta, 2020).

The present investigation studies the effect of theatre-based teaching on IX standard students' achievement in Kannada language. By discovering the latent of theatre-based learning in encouraging improve language skills as well as cultural understanding, this investigation aim to give to the improvement of innovative pedagogical strategies for language teaching in India and particularly Karnataka schools.

2.   SIGNIFICANCE OF RESEARCH

This examination on the consequence of theatre based schooling on IX standard students' attainment in Kannada language is significant as it provides to the improvement of innovative pedagogical interventions, increasing language knowledge results and promoting instructive thoughtful. The results will notify language teachers, curriculum designers as well as policymakers, eventually benefiting students, parents as well as school and college level educational institutions. By discovering the latent of theatre-based teaching, this research aim and purpose to increase language education, fostering cultural compassion, student commitment, inspiration and academic achievement in Kannada language along with providing precious insights for outlook research on theatre-based education in all Indian languages.

3.   REVIEW OF RELATED LITERATURE

The use of theater-based instructional approaches in education has garnered a lot of attention in recent years. Research has consistently shown that these methods can improve student performance across different subjects.

DIE has been found to improve language proficiency (Mahant & Ghosh, 2024; Bsharat, 2017). DIE has been shown to improve student comprehension, attitudes, and empathy (Gascon, 2019). Abuh (2019) discovered that drama and theater strategies outperformed traditional education approaches for English language competency.

Role-playing has been proven to significantly improve academic performance in a variety of areas, including chemistry (Okpala et al., 2021), government (Ikwuka et al., 2021), and English (Maulana & Lolit, 2023). These studies show that role-playing increases student involvement, motivation, and understanding.

Adıguzel (2017) discovered that creative drama tactics significantly improve academic achievement in ICT classes. This study demonstrates the effectiveness of theater-based techniques in developing technical competencies.

Deer et al. (2024) investigated the impact of out-of-school visual art activities on academic achievement, concluding that these activities can improve student accomplishment. The literature review demonstrates that theater-based teaching tactics like as DIE, role-playing, and creative drama can boost student achievement across a wide range of disciplines. These techniques improve engagement, motivation, and comprehension, leading to better academic performance.

4.   STATEMENT OF THE PROBLEM

The study aimed to investigate the effect of theater-based teaching on students' achievement in Kannada Language among IX standard students of secondary school in Chitradurga District.

5.   OBJECTIVES

1. To study the impact of conventional teaching method on achievement in kannada language among IX standard students.
2. To study the impact of theater-based teaching method on achievement in Kannada language among IX standard students.

6.   HYPOTHESES

1. There is no significant difference in the mean achievement in Kannada scores of IX standard students in the CTM Group between the pre-test and post-test who learned through the conventional method.
2. There is no significant difference in the mean achievement in Kannada scores of IX standard students in the TBT Group between the pre-test and post-test who learned through the theater-based teaching method.

7.   METHODOLOGY

This study examined the effect of theater-based teaching on students' achievement in Kannada Language among IX standard students of secondary school in Chitradurga District. This type of method is mainly important for nurturing a more overall understanding of the language, making it a valuable tool for improving academic achievement among school students. This study involved a sample of 40 ninth-grade students, separated into two groups: an experiment group (N=20) taught using theater-based method and a controlled group (N=20) taught using traditional method of teaching. The intervention included interactive theater exercises, role-playing activities as well as discussions centered on culturally relevant narratives. A 'Randomized Matching Control Group Pre-test Post-Test' research design was utilized, with the Achievement Test in Kannada Language-developed by the researcher and consisting of 40 multiple choice items used to assess students' achievement and the reliability of the test was confirmed through test-retest technique. 't' test techniques was conducted for inferential analysis. The results obtained with the help of SPSS Package and MS Excel and the level of significance was fixed at 0.05 and 0.01 levels.

8.   ANALYSIS OF DATA

The collected data are examined based on the objectives as well as hypotheses using an independent 't' test on the achievement in Kannada language scores of IX standard students.

Objective-1:   To study the impact of conventional teaching method on Achievement in Kannada Language among IX standard students.

Hypothesis-1: There is no significant difference in the mean achievement in Kannada scores of IX standard students in the CTM Group between the pre-test and post-test who learned through the conventional method.

Table-1: Table displays of comparison of mean scores of pre and post tests on Achievement in Kannada language of IX standard students of CTM Group who learnt through the conventional method.

Test	No.	CM Group (Conventional Method)					
		Mean	Standard Deviation	Obtained 't' Value	df	Table Value	Results
Pre Test	20	35.550	6.999	0.833	38	2.02 at 0.05	Not
Post Test	20	37.300	6.266			level	Significant
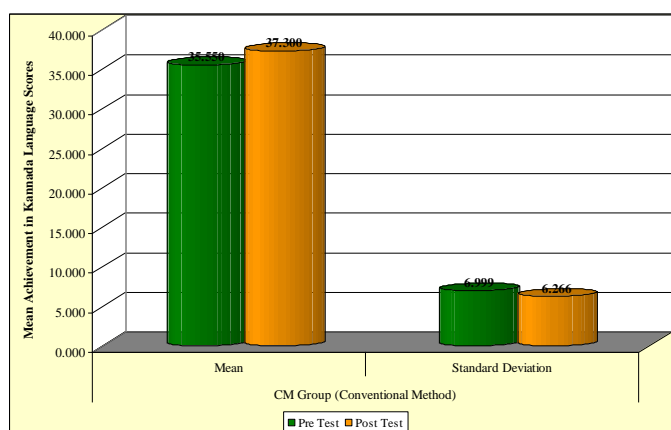
Fig.1:   Graph shows comparison of mean scores of pre and post tests on Achievement in Kannada Language of IX standard students of Control Group those who learnt through the conventional method.

The statistics shown in Table 1 and Figure 1, which compare the mean scores of pre-test and post-test Achievement in Kannada language among IX standard students of the CM Group (Conventional Method), clearly show that there is no significant difference. The pre-test mean score for Achievement in Kannada language was 35.550 with a standard deviation of 6.999, whereas the post-test mean score climbed significantly to 37.300 with a standard deviation of 6.266. The computed 't' value of 0.833, with 38 degrees of freedom, was found to be less than the crucial 't' value of 2.02 at the 0.05 significant level. Therefore, based on this statistical analysis, we fail to reject the null hypothesis. This suggests that there is no significant change between the pre-test and post-test mean scores in Achievement in Kannada language among IX standard students in the CM Group who received conventional instruction. As a result, the study concludes that traditional teaching methods may have little impact on improving Kannada language achievement among students at this educational level.

Objective-2: To study the impact of theater-based teaching method on Achievement in Kannada language among IX standard students.

Hypothesis-2: There is no significant difference in the mean Achievement in Kannada Language scores of IX standard students in the TBT Group between the pre-test and post-test who learned through the theater-based teaching method.

Table-2: Table shows of comparison of mean scores of pre and post tests on Achievement in Kannada Language of IX standard students of TBT group those who learnt through the theatre-based teaching method.

Test	No.	Theatre-based Teaching (TBT) Group					
		Mean	Standard Deviation	Obtained 't' Value	df	Table Value	Results
Pre Test	20	38.050	6.692	2.689	38	2.02 at 0.05 level	Significant at 0.05 level
Post Test	20	42.550	3.347				
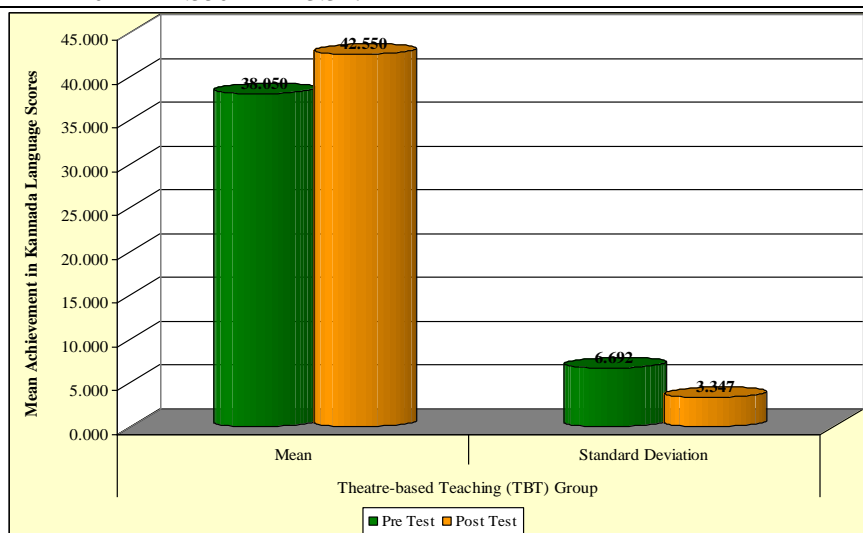
Fig.2: Graph shows comparison of mean scores of pre and post tests on Achievement in Kannada Language of IX standard students of TBT Group those who learnt through the conventional method.

Table 2 and Figure 2 show a comparison of pre-test and post-test mean Achievement in Kannada Language scores among IX standard students in the Theatre-based Teaching (TBT) group. The pre-test mean score for Creativity was 38.050, with a standard deviation of 6.692, whereas the post-test mean score climbed dramatically to 42.550, with a standard deviation of 3.347. The computed 't'

value of 2.689, with 38 degrees of freedom, exceeded the crucial 't' value of 2.02 at the 0.05 significance level. This shows a statistically significant change between the pre-test and post-test mean scores for Achievement in Kannada Language among TBT Group IX standard students who were taught utilizing theatre-based methods. As a result, we reject the null hypothesis, implying that there is a significant difference in the mean scores of pre-test and post-test Achievement in Kannada Language among IX standard TBT students. As a result, it is possible to conclude that the theatre-based teaching method has a positive and significant impact on improving Kannada Language Achievement among students at this educational level, as indicated by the large increase in post-test scores compared to pre-test scores.

9.   MAJOR FINDINGS

From the analysis of data, the following findings emerged.

➢ The conventional teaching technique might not have a considerable impact on the improvement of Achievement in Kannada language of students at this instructive level.

➢ The theatre-based teaching approach (The intervention included interactive theater exercises, role-playing activities as well as discussions centered on culturally relevant narratives) has a optimistic and considerable effect on improving achievement in Kannada language among students at this educational level.

10.   DISCUSSION OF FINDINGS

The current study's findings unambiguously show that theatre-based teaching improves Kannada language achievement among IX standard students. These findings are consistent with prior research demonstrating the benefits of drama and theatre-based education in language learning (Joshi, 2017; Kumar, 2019; Sharma, 2015).

The participatory and engaging character of theatre-based instruction has resulted in a considerable boost in language achievement among pupils. Adıguzel (2017) found that role-playing, culturally relevant narratives, and debates improved language skills, cultural understanding, and student involvement, supporting the impact of creative theater on academic attainment.

In contrast, conventional teaching methods had little influence, mirroring the opinions of Mahant and Ghosh (2024) and Gascon (2019), who stressed the limitations of traditional teaching approaches in increasing language skills and cultural understanding. The study's findings are also consistent with Ikwuka et al.'s (2021) research on the influence of role-playing on academic accomplishment in government, as well as Okpala et al.'s (2021) study on the effects of role-play on chemistry achievement. These studies highlight the effectiveness of theatre-based instruction in improving learning outcomes across a variety of areas.

The culturally relevant narratives used in this intervention most likely contributed to the large increase in language achievement. This conclusion backs up Bsharat's (2017) research on drama's role in strengthening students' English language skills, emphasizing the significance of contextualizing language acquisition.

11.   CONCLUSION

The study's findings unambiguously show that theatre-based teaching improves Kannada language achievement among IX standard pupils. In contrast, standard instructional approaches had little influence. This intervention's interactive theatrical exercises, role-playing games, and culturally relevant tales all helped to improve language abilities, cultural understanding, and student engagement.

12.   EDUCATIONAL IMPLICATIONS

The study's findings have important implications for language instruction in India. Educators and governments should think about incorporating theatre-based teaching strategies into language

curricula, especially at the secondary level. By implementing theatre-based teaching approaches, educational institutions can improve language learning outcomes, foster cultural awareness and appreciation, increase student motivation and engagement, and assist students' overall growth. Furthermore, teacher preparation programs should emphasize theatre-based pedagogy, and teaching materials should include culturally relevant tales and interactive exercises.

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IMPROVING TEACHER EDUCATION PROGRAMS THROUGH CURRICULUM AND EDUCATIONAL INNOVATION

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Abstract

The present condition of teacher education programs, highlighting both their strengths and weaknesses while emphasizing the evolving requirements placed on educators in the 21st century. The article that conventional teacher education approaches may fall short in equipping future teachers with the essential skills needed to navigate contemporary challenges within classrooms. To tackle these issues, the study recommends a holistic framework for curriculum and pedagogical innovation. This framework encompasses several key components, such as the incorporation of technology, an emphasis on culturally responsive teaching, the enhancement of socio-emotional competencies, and a dedication to ongoing professional development. These elements are interconnected to create a thorough strategy for teacher training that not only conveys subject knowledge.The article examines the importance of subject matter expertise while promoting the cultivation of reflective, adaptable, and empathetic educators. Additionally, it highlights successful case studies from various teacher education institutions around the globe that have adopted elements of this methodology, underscoring the beneficial results and insights gained.

Keywords: Teacher Education, Educational Innovation.

INTRODUCTION:

Educational Innovation encompasses the introduction of new and valuable ideas, including processes, techniques, activities, or products and services. Educational institutions, including schools and teacher training programs, have the opportunity to implement innovations or experiments in various aspects of their operations related to teaching, learning, training, or school management. This approach aims to enhance the efficiency of institutions in addressing challenges and difficulties encountered in their daily functions. A comprehensive network of resource institutions at national, provincial, and district levels collaborates to elevate the quality and effectiveness of pre-service teacher training programs, as well as in-service training seminars for educators nationwide. Educators hold a crucial position in the enhancement of education. It is widely recognized that teachers form the foundation of society. A comprehensive teacher education program is vital for cultivating proficient and capable educators. In India, the teacher education program has progressed over the years to address the requirements of both the local and international communities. The field of teacher education is adapting to the evolving demands of the educational system. As the educational needs of students change and technology continues to advance, the roles of teachers are also expanding. It is imperative for teachers to inspire, support, and facilitate learning experiences that allow students to explore their potential. Our objective is to assist students in discovering their talents, optimizing their physical and intellectual capabilities, and fostering positive social and ethical values that contribute to responsible citizenship.

The integration of new information and communication technologies (ICTs) has led to a notable transformation in educational delivery methods. The utilization of the Internet and the World Wide Web for instructional purposes is increasingly prevalent in higher education. However, offering Library and Information Science (LIS) education within a virtual learning environment (VLE) presents contemporary challenges. This research aims to address this gap, with a focus on assessing effectiveness. The study introduces a framework that examines the relationship between learners and technology, emphasizing control and learning efficacy. Such a technology-mediated environment has also been employed for the provision of library services, indicating its extensive application.

LIS schools and libraries encounter various challenges and concerns. This paper discusses the role of Virtual Learning Environments, exploring how they can enhance learning and teaching. It also evaluates the advantages and disadvantages of virtual learning, along with critical factors to consider for effective implementation in LIS education within a VLE.

Technological Pedagogical Skills

In the contemporary and dynamic landscape, education, especially at the higher level, acts as a pivotal influence. Consequently, advancements in technology exert a significant impact. The endeavors engaged in by students reflect this shift. The information society has introduced various methods for accessing knowledge through the ongoing development of learning tools, acknowledging that educational institutions are no longer the sole or even primary sources of knowledge for many learners.

In various educational domains, students now have access to a multitude of information sources, often presented in more engaging formats. As a result, what students seek is not merely information, which they undoubtedly require. Virtual Learning Environments and e-learning management systems, along with technological pedagogical skills, necessitate the capability to organize and interpret information for effective cognitive learning. Most importantly, students should envision themselves as future citizens equipped with the skills to search, select, and critically evaluate information.

Recently, educational instruction scenarios have begun to experience substantial transformations, particularly due to the advent of new technologies, notably the impact of learning management systems (LMS) and social networking sites (SNS). This indicates that traditional educational institutions must contemplate the incorporation and integration of electronic platforms into their teaching methodologies. Universities have persistently sought to implement LMS within the formal educational framework, enhancing the information delivery process. To meet evolving demands, information and communication technology (ICT) is being utilized. Research indicates that the practical application of these platforms primarily serves as repositories for resources and information, while their pedagogical potential remains to be fully realized.

Challenges and Opportunities for technological pedagogical skills
1. Addressing digital divides and equity issues
2. Keeping pace with emerging technologies
3. Balancing technology integration with pedagogical needs
4. Developing sustainable TPSK models
5. Exploring AI-powered educational tools

Real-World Applications:
1. Flipped classrooms
2. Gamification
3. Virtual and augmented reality
4. Online learning platforms
5. Mobile learning initiatives.

Developing technological pedagogical skills
1. Professional development programs
2. Collaborative communities of practice
3. Coaching and mentoring
4. Action research and reflection
5. Curriculum redesign

Integration of Technology:

➢ **Digital Literacy:** It is essential for educators to possess digital literacy in order to effectively navigate the rapidly evolving technological landscape. Teachers should not only understand how to utilize technology but also be equipped to teach digital literacy skills to their students.

➢ **Effective Online and Blended Learning**: With the growth of online and blended learning models, educators must be adept at designing and delivering impactful lessons. They should be skilled in evaluating digital content and activities, as well as proficient in utilizing Learning Management Systems (LMS) and various online platforms.

➢ **Adaptive Learning Tools:** The increasing presence of artificial intelligence and adaptive learning technologies in education necessitates that teachers familiarize themselves with these tools and learn how to leverage them to tailor educational experiences for individual students.

➢ Educators have a responsibility to instruct students on the responsible and ethical use of technology, which encompasses online safety, the prevention of cyberbullying, and the principles of digital citizenship.

The significance of cultural diversity

In contemporary classrooms cannot be overstated, as students hail from a variety of backgrounds, languages, and skill sets. It is essential for educators to create inclusive environments where every student feels valued and respected.

➢ **Cultural Competence:** Educators must possess an understanding of various cultural norms, beliefs, and behaviors. This knowledge enables them to customize their teaching methods to meet the diverse needs of their students.

➢ **Inclusive Curriculum:** Teachers should modify their instructional strategies to cater to different learning styles and abilities. This may involve utilizing culturally relevant resources and implementing Universal Design for Learning (UDL) principles.

➢ **Equity Advocacy:** Educators are anticipated to advance educational equity by identifying and addressing disparities in resources and opportunities among various student demographics.

Numerous studies indicate that traditional teacher preparation programs may fall short in equipping educators to meet the intricate and diverse demands of contemporary classrooms. This has led to calls for significant reforms in teacher education.

1. Integration of Technology: There is an increasing recognition that teacher education programs must encompass digital literacy skills. This involves training educators to effectively utilize educational technology tools in the classroom and to adapt to an evolving technological landscape.

2. Emphasis on Inclusive Education: Educators should be trained to possess the skills necessary to support students from various backgrounds and with different learning needs.

3. Importance of Practical Experience: Research underscores the necessity of practical, hands-on teaching experiences, including classroom engagement, pedagogical training, and internships.

4. Culturally Responsive Teaching: Effective teacher education programs integrate culturally responsive teaching strategies, enabling educators to acknowledge and adapt to the cultural backgrounds of their students.

5. Collaborative Learning and Professional Development: Continuous professional development and collaboration among educators are emphasized, providing opportunities for knowledge exchange and staying updated on effective practices.

6. Assessment and Feedback Mechanisms: Teacher education programs must implement strong assessment and feedback systems to assist candidates in identifying areas for improvement and tracking their progress.

7. Research-Based Practices: The use of research-informed teaching strategies is essential for enhancing the effectiveness of educators, highlighting the importance of practical experience in teacher training, which includes early classroom engagement, pedagogical training, and internships.

Different methodologies were employed. Consequently, it is essential to evaluate these overarching conclusions within the framework of your specific research or program assessment.

1. Educators must develop technological pedagogical skills to effectively integrate technology into their teaching.

2. Students need to cultivate critical thinking, information literacy, and digital literacy skills.

3. Educational institutions should prioritize innovative pedagogies that leverage technology.

4. Research should focus on optimizing the pedagogical potential of LMS and SNS.

5. Investigating effective strategies for integrating ICT into educational frameworks.

6. Developing faculty training programs for technological pedagogical skills.

7. Designing learner-centered virtual learning environments.

8. Exploring the potential of emerging technologies (e.g., AI, AR, VR) in education.

CONCLUSION:

This Study underscores the necessity of updating teacher education programs through innovative curricula and teaching methodologies. In order to meet the diverse and intricate needs of 21st-century learners, educators must remain flexible in response to the dynamic nature of the educational environment. Our results emphasize the critical role of individualized instruction, the incorporation of technology, practical experience, cultural awareness, collaboration, and evidence-based teaching practices in teacher training. By embracing these advancements, teacher education programs can equip a new cohort of educators to effectively engage, motivate, and instruct future students, thus playing a vital role in the continuous enhancement of our educational systems and society.

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STUDENTS PERCEPTION ABOUT NEW EDUCATION POLICY-2020: A STUDY IN DAKSHINA KANNADA DISTRICT

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Abstract

The New Education Policy (NEP) 2020 is a comprehensive agenda that aims to transform the Indian education system to meet the challenges of the 21st century. It introduces several innovative approaches to enhance the quality and inclusivity of education. According to the policy makers, NEP 2020 emphasizes the development of student's intellectual, creative, and social skills. The multidisciplinary nature of the curriculum would encourage students to explore a range of subjects. Students will have the flexibility to pick subjects across different streams as per their interests and career goals. This would break the rigid walls of subject-stream limitations and encourage cross-disciplinary learning. The study aims to understand the level of awareness, perception, and engagement of students, who are the stakeholders in these respective groups with the NEP 2020. Primary data was collected from 120 undergraduate students of Dakshina Kannada district by using a questionnaire in Google forms & analysis was done through basic percentage analysis. To test the hypothesis chi square test was used. The findings provide insights into the awareness gaps and varying levels of engagement across the different educational levels, offering valuable implications for policymakers and educators to effectively implement the NEP 2020 reforms at each stage of education.

Keywords: NEP, Awareness, Curriculum, educational reforms, Students, Stakeholders

I INTRODUCTION

For nearly 34 years, our nation has been ensnared in an extremely strict educational system that has stunted the ascent of numerous well-known individuals in the community. A new education policy is introduced in an effort to alter the educational system's foundations and introduce a more useful approach to teaching and learning. It is a step in the direction of a new education policy and should work well enough. It is based on the fundamental principles of equity, quality, affordability, and accountability. Under T.S.R. Subramanian's direction, the "Evolution of the New Education Policy" began to take shape in May 2016, which is when the idea of developing a holistic educational approach was born. The 2019 Lok Sabha elections resulted in the release of the Draft New Education Policy, 2019, which was then available for public study and comment. The NEP, 2020 came into being after carefully weighing the input and views of over two lakh out of the 2.5 lakh Gram Panchayats, 6600 Blocks, 6000 ULBs, and 676 Districts. The New Policy on Education (NEP 2020) was approved by the Union Cabinet in July 2020. It supersedes the earlier NEP, which was developed in 1986 and then revised in 1992. The New Education Policy aims to update and reform the governance and regulation of the educational system in its entirety. It seeks to create a new framework that is in line with the ambitious objectives of education for the twenty-first century. For instance, SDG4 draws on India's rich traditions and values. The development of each person's creative potential is highly valued in this NEP policy. It is predicated on the idea that cognitive abilities—from basic ones like reading and numeracy to more complex ones like critical thinking and problem-solving as well as social, ethical, and emotional capacities—should be fostered in education. The goal of this approach is to establish India as a "Global knowledge Superpower." In addition to this, it was with the introduction of NEP in 2020 that the Ministry of Human Resource Development was renamed to the Ministry of Education.

II REVIEW OF LITERATURE

Previous studies on the topic highlighted below:

P.S.Aithal and Subhrajyotsna Aithal(2020) discussed different innovations and predicted implications of NEP 2020 on higher education system. **Dr. Rupesh G. Sawant, Dr. Umesh B. Sankpal(2021**) conducted a research based on NEP 2020 by focusing on Higher Education. Authors discussed about background and emergence to highlight vision, focus thrust areas and principle guidelines. **Shalu Jain, Ankur Khare, Om Goel (2023)** conducted the study to investigate impact of NEP 2020 on Higher Education by comparative analysis of select educational institutions before and after the implementation of the policy. They concluded quality improvement in higher education. **Khritish Swargiary, Kavita Roy, Swargiary and Roy (2023)** conducted a study focusing on awareness level, perception, students engagement in respective group with NEP 2020

III STATEMENT OF THE PROBLEM

Previous studies on topic highlighted background and emergence of NEP, its structure, guidelines, and its impact on higher education. Again study also discussed students awareness level, perception, and their engagement in general. However, students' perception about New Education Policy-2020 in Dakshina Kannada District is lacking. **To fill up this research gap present study is undertaken.**

IV OBJECTIVES OF THE STUDY

The present study is based on following objectives

1. To know the concept of NEP- 2020
2. To assess the level of awareness among respondents about NEP-2020
3. To explore the perceptions and attitudes of respondents towards NEP -2020.

V HYPOTHESIS

To give weightage to the objectives' following hypothesis has been taken

H_0: There is no association between age and benefits of the students from NEP -2020

H_1: There is an association between age and benefits of the students from NEP -2020

VI METHODOLOGY

The present study considers both primary and secondary data. Primary data was collected from 120 undergraduate students studying in first grade college of Dakshina Kannada district by using a questionnaire in Google forms & analysis was done through basic percentage analysis. To test the hypothesis chi square test was used. Secondary data was collected through websites and from peer reviewed journals.

VII ABOUT NEW EDUCATION POLICY(NEP)

The New Education Policy, 2020 centers on the 5+3+3+4 educational framework, where curriculum is organized according to age groups of 3–8, 8–11, 11–14, and 14–18 years, respectively. Making "India a global knowledge superpower" is the goal of NEP 2020. It was long overdue for life skills to be recognized as important, and the NEP has focused more on life skill development throughout the educational process. One of the main goals of the policy is also to improve teaching quality. Since teachers are essential to the educational system, raising educational standards won't be easy without enhancing teacher preparation. A four-year undergraduate curriculum with several departure possibilities, an Academic Bank of Credit to enable credit transfer, and the creation of a National Research Foundation to support research activities are just a few of the major reforms to higher education that NEP 2020 proposes. The strategy encourages a multidisciplinary approach to education by giving students the freedom to select courses from different academic streams and by encouraging creativity and critical thinking. The policy places a strong emphasis on teachers' continual professional

development, with particular attention paid to creative pedagogies, ongoing evaluation, and technological integration. NEP 2020 acknowledges the importance of technology in education and promotes its use to provide access to high-quality education and improve learning outcomes. To promote improved comprehension and retention of concepts, the policy supports the use of mother tongue or local language as the medium of teaching in schools, at least until the fifth grade. Reducing the emphasis on high-stakes exams, the strategy aims for a move away from rote memorization and toward a more competency-based evaluation system.

Top 20 Principles of NEP 2020

- Focus on recognizing and nurturing each student's unique abilities for holistic development.
- Prioritization of foundational literacy and numeracy by grade 3.
- Flexible learning pathways to allow students to choose their own educational and career trajectories.
- Eliminating barriers between arts, sciences, curricular, and extracurricular activities for a seamless learning experience.
- Multidisciplinary and holistic education across subjects to foster knowledge uniformity.
- Emphasis on conceptual learning over rote memorization and evaluation based on a single exam.
- Promotion of creativity, critical thinking, ethics, and human values.
- Encouraging the incorporation of multilingualism and communication skills.
- Regular formative assessments to support learning rather than high-stakes exams.
- Use of technology to enhance access, especially for students with disabilities, and improve educational planning.
- Commitment to diversity, equity, and inclusion in all educational policies.
- Synergy in curriculum across all levels of education from early childhood to higher education.
- Teachers are central to learning so there should be equal focus on recruitment, professional development, and positive work environments.
- A regulatory framework that ensures transparency and innovation while encouraging autonomy and governance.
- Promotion of research as a fundamental element of education and progress.
- Continuous review and assessment by experts to ensure educational progress.
- Fostering pride in India's diverse cultural heritage and knowledge systems.
- Education is a public service, with quality education as a basic right for every child.
- Significant investment in public education and promotion of philanthropic private participation.
- Focus on regular student assessments.

VIII NEP IN KARNATAKA

India's first state to adopt the New Education Policy (NEP) 2020 was Karnataka. In order to improve and restructure the educational system by encouraging a more flexible and all-encompassing approach to learning, the state implemented NEP for the 2021–2022 academic year. The state's commitment to raising educational standards and guaranteeing improved student results is reflected in this program. Nevertheless, the State Education Policy (SEP), which Karnataka launched in 2024–2025, expands upon the ideas of the New Education Policy (NEP) 2020. With an emphasis on regional resources, languages, and culture, the SEP—which is seen as the revised NEP—aims to customize educational

reforms to the unique requirements and environment of Karnataka. This change demonstrates the state's dedication to improving the educational system while complying with

IX ANALYSIS AND INTERPRETATION OF DATA

Primary data collected from 120 undergraduate students studying in first grade college of Dakshina Kannada district to assess the level of awareness about NEP-2020 and to explore their perceptions and attitudes towards NEP -2020 analyzed as follows

Table 1: Demographic profile of the respondents

Particulars	No of respondents	Percentage
Gender		
Male	60	50
Female	60	50
Total	120	100
Age		
19	60	50
20	30	25
21	30	25
Total	120	100
Type of degree they pursue		
BCOM	41	35
BA	10	8
BSC	20	16
BBA	10	8
BCA	39	33
Total	120	100

Source: Survey data

Table 1 shows demographic profile of the respondents. Out of 120 respondents surveyed 50% each are male and female, 50% fall under the age group 19 years, remaining 25% each fall under the age group 20 years and 21 years. Regarding pursuing programme, 34% do BCOM programme, 33% BCA, 16% BSC, 8% each BA and BBA.

Table 2: Awareness level of NEP 2020

Particulars	No of respondents	Percentage
Yes	100	83
Some what	20	17
No	Nil	Nil
Total	120	100

Source: Survey data

Awareness level of NEP 2020 shown in Table 2 highlights that 83% of the respondents surveyed aware of NEP 2020 and remaining 17% are somewhat aware of it. It is very interesting to see that no single respondent is unaware of NEP 2020

Table 3 given below shows the different benefits of NEP 2020 to the UG students. Here Likert's 5 scale rating method was followed. SA- indicates Strongly agree with 5 points, A-Agree

with 4 points, N- Neutral with 3 points, D- Disagree with 2 points and SD- strongly disagree with 1 point.

Table 3: Major benefits of NEP 2020

Sl No	Benefits	SA	A	N	D	SD	Mean
1	Professional Skill Development	30	75	9	6	--	4.06
2	New curriculum structure	60	53	7	--	--	4.44
3	Enhanced Teaching practices	30	78	6	6	--	4.1
4	More importance to Internal Assessment	24	78	6	6	6	3.9
5	Easy to pass	18	72	18	6	6	3.75
6	Increased practical skills	30	75	9	6	--	4.08
7	Multi stage entry and exit	60	60	--	--	--	4.5
8	Open elective subjects	30	90	--	--	--	4.25
9	Integration of Technology	24	78	12	6	--	4.00
10	Transparency	24	78	6	6	6	3.9
11	Choice to opt creative combination of subjects	18	72	18	6	6	3.75

Source: Survey data

Table 3 shows that for all 11 benefits from NEP-2020 mean scoring is in between 3.5 and 4.5. It highlights that respondents agree with the benefits of NEP-2020

Table 4: Results of Chi square Test

Chi square value	D.F	0.05 level of significance	Result
6933.633	8	15.50	Significant

Source: Survey data

Table 4 shows that the calculated value of Chi square = (O-E)2/E= 6933.633 is more than the table value =15.50 at 8 degrees of freedom, it is significant. Hence, we reject null hypothesis and conclude that **there is an association between age and benefits of the students from NEP 2020**

Table 5 given below shows the challenges faced by the under graduate students from NEP-2020. Here Likert's 5 scale rating method was followed. SA- indicates Strongly agree with 5 points, A-Agree with 4 points, N- Neutral with 3 points, D- Disagree with 2 points and SD- strongly disagree with 1 point.

Table 5: Challenges faced by the students from NEP 2020

Sl no	Particular	SA	A	N	D	SD	Mean
1	Increased pressure	30	75	9	6	--	4.08
2	More subjects	54	53	7	6	--	4.29
3	Creates confusion	30	78	6	6	--	4.1
4	UUCMS problem	24	78	6	6	6	3.9
5	High scope for discontinuation of the course	18	42	18	18	24	4.27
6	No scope for other fields except studies	30	57	15	6	12	3.73
7	Insufficient Teacher training	24	48	18	24	6	3.5
8	Lack of practical knowledge	21	30	24	30	15	3.1
9	Server issues	24	78	12	6	--	4

Source: Survey data

Table 5 shows that for all 9 challenges of NEP-2020, mean scoring is in between 3 and 4.5. It highlights that in majority cases respondents agree with the challenges of NEP-2020

Table 6: Overall perception of the students regarding NEP 2020

Particular	No of respondents	Percentage
Very good	18	15
Good	72	60
Neutral	19	16
Bad	5	4
Very bad	6	5
Total	120	100

Source: Survey data

Overall perception of the under graduate students regarding NEP 2020 shown in Table 6 shows that majority of the respondents as high as 60% said NEP 2020 is good and gives a way for high-quality education and improved learning outcomes

X SUGGESTIONS

In the light of above findings following suggestions are given:

- To conduct more workshops to students, to enhance theirknowledge on NEP regulations.
- To organize seminars and training programs to teachers, so that they can give reliable information to the students at the right time and at right volume.
- Many students are finding difficulty in uploading UUCMS. Hence this system and server issues need to be set in such a waythat, the students should not face any difficulties while uploading the documents.
- Due to increased content of the syllabus, students find it strain in focus on soft skills. Therefore, if possible few contents should be eliminated, so that they can concentrate on practical oriented programs.
- Projects, and internships must be made mandatory at the undergraduate level.
- Give importance to vocational education along with encouragement to the student to continue further studies. An entrepreneurial spirit is to be encouraged through new start-ups and promoting incubation centers.
- Skill development is happening but till now the impact is not visible. We need to put more focus. Skills about job demands must be taught. The curriculum, activities, and industry linkages need to be redesigned keeping in mind the demand for skill sets and knowledge
- Industry and students alike anticipate the availability of specialized courses to ensure that they receive the most up-to-date and effective education and are prepared for employment. To enable students to enrol in specialized programs, vocational and diploma courses need to be made more appealing. To make teaching and research more appealing to the younger generation, incentives should be given to these professions
- Taking steps to prevent dropout rates in higher education.
- Funds must be given to Affiliated colleges to grow into Autonomous institutions.
- Greater emphasis is to be laid on leadership and governance. Central Government must participate in the dissemination, advocacy, and evolution process of NEP and implement it with proper understanding, clarification, and consensus with nodal agencies.
- Indian knowledge systems, including tribal and indigenous knowledge, must be accurately and methodically included in the curriculum to promote Indian Ethos.

XI CONCLUSIONS

In conclusion, the NEP 2020 is an incredibly ground-breaking and innovative policy. The Policy itself has an impressive view, but the real difficulty is in putting it into practice. If India is to reap the benefits of demographic change and take advantage of the opportunities presented by a knowledge economy that is expanding quickly, it must be implemented effectively. If successfully implemented while considering the real-world difficulties facing our current educational system, pedagogy will become more experimental, holistic, integrated, learner-centered, discovery-oriented, adaptable, and entertaining. By implementing NEP let's make India the "knowledge hub" of the world that it was by achieving the goals as soon as we can.

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ARTIFICIAL INTELLIGENCE IN TEACHING

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Abstract

AI is not just a tool for the future; it's a powerful ally in today's classrooms, enhancing learning experiences, supporting teachers, and making education more personalized and inclusive. By harnessing the potential of AI, we can unlock real-time feedback and assessment, allowing students to receive immediate insights into their progress. AI-powered tools also help teachers by automating administrative tasks like grading and attendance, giving them more time to focus on student engagement and tailored instruction. This technology also promotes accessibility, providing resources for students with disabilities and those in remote areas, helping to bridge educational gaps

Therefore, the primary goal of this study is to assess the AI tools used by the undergraduate Students and explore the teachers of undergraduate to use AI tools in teaching earning process.

Keywords*: Artificial Intelligence, teaching, learning*

Introduction:

Artificial intelligence is upending several industries, and education is one of them. Education, in particular, is one of those sectors where AI can make a significant impact. The use of AI in education ensures that every learner receives a personalized and engaging learning experience.

The arrival of AI (Artificial Intelligence) in the classroom is more than just a technological breakthrough; it raises fundamental questions about the current education system.

This fusion of technology and teaching is not only transforming the way students learn, but is also generating a huge debate about its implications, challenges, and opportunities in the academic sector.

Therefore, the irruption of AI in the world of education is a paradigm shift that is worth analyzing in depth. And this is exactly what we are going to do today.

Objective of the Study:

- To find out usage of Artificial Intelligence by the under graduate students in their daily life.
- To promote usage of artificial intelligence for under graduate students in the learning process

Methodology adopted:

A Google form Survey method was used for the present study for collecting necessary data. The Questionnaire consisted of eight items related to the aspects of usage of Artificial Intelligence by the under graduate students in their daily life. The investigator sent the Google forms to the under graduate students of Kumadvathi First Grade College, Shikariura and collected the information.

Sample Selected for the Study:

The Sample consists of my study is 42 under graduate students of Kumadvathi First Grade College, Shikariura.

Tool of the study:

Google form Questionnaire developed by the investigator was used for collecting data.

Statistical technique:

The obtained data was analysed by using appropriate statistical techniques like Percentages.

Findings of the study:

Sl. No.	Items	Responses	Percentage
1	Search for information	42	100.00
2	Check grammar	42	100.00
3	Summarize documents	29	69.05
4	Paraphrase a document	24	57.14
5	Create a first draft	22	52.38
6	Google maps	38	90.48
7	Image to text	29	69.05
8	Movie making	23	54.76

- All the students opinions that they are searching information through artificial intelligence.
- All the students opinions that if they get confusion in grammar they clarify it through artificial intelligence.
- 69.05% of the students opinions that, they are summarising the documents with the help of artificial intelligence.
- 57.14% of the students opinions that, they are paraphrase the documents with the help of artificial intelligence.
- 52.38% of the students opinions that, they are doing they draft with the help of artificial intelligence.
- 890.48% of the students opinions that, they are they are using Google maps as an artificial intelligence in their routine life.
- 69.05% of the students opinions that, they are they converting text to image or image to text with the help of artificial intelligence.
- 54.76% of the students opinions that they are making movies with the help of artificial intelligence
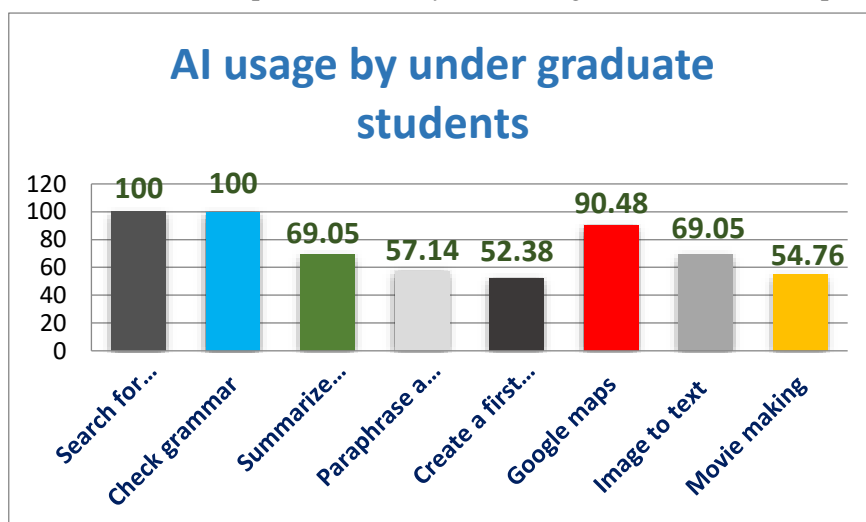
Implications of the study:

These are the importance of Artificial intelligence tools in teaching learning

- **Adaptive Learning Platforms**: AI-powered tools adjust the difficulty and pace of lessons based on a student's performance and learning style.
- **Individualized Feedback**: AI tools can provide instant feedback on assignments, pinpointing areas of improvement and offering tailored recommendations.

- **Virtual Tutors**: AI-driven tutors can assist students with subjects like math, science, or languages, answering questions and providing step-by-step guidance.
- **24/7 Access**: These systems allow students to learn at their own pace and outside of traditional classroom hours.
- **Automated Attendance**: AI-powered facial recognition or RFID systems can track attendance seamlessly.
- **Behaviour Analysis**: AI systems can monitor student behavior patterns to identify disengagement or potential challenges early.
- **Grading Automation**: Tools like Gradescope help teachers evaluate essays, tests, and assignments more efficiently.
- **Lesson Planning**: AI can assist in creating lesson plans tailored to curriculum standards and student needs.
- **Speech-to-Text and Text-to-Speech**: AI tools can assist students with visual or hearing impairments.
- **Assistive Technology**: Tools like predictive typing and cognitive aids help students with learning disabilities.
- **AI Translators**: Apps like Google Translate or AI chatbots help students communicate and learn new languages.
- **Speech Recognition**: AI tools provide pronunciation feedback, improving language fluency.
- **Streamlining Enrollment**: AI can automate enrollment processes, from application screening to student placement.
- **Predictive Analytics**: Schools can use AI to predict student dropouts or resource needs.
- **AI in Coding Lessons**: Platforms like Scratch or Code.org introduce students to AI and programming concepts.
- **Robotics and AI Labs**: Encourage hands-on experience with AI technologies and robotics.
- **Engaging Content**: AI-driven games can make learning fun and interactive, improving knowledge retention.
- **Customized Challenges**: Games adapt to the student's skill level, keeping them motivated.
- **AI Chatbots**: Tools like Woebot provide mental health support to students.
- **Sentiment Analysis**: AI can monitor emotional well-being by analyzing students' written or verbal communication.
- **AI Training Modules**: Educators can use AI tools to learn new skills or improve their teaching methods.
- **Real-Time Feedback**: AI can analyze classroom interactions and provide constructive feedback to teachers.
- **Immersive Learning**: AI enhances VR/AR experiences, allowing students to explore complex concepts (e.g., anatomy, space exploration).
- **Simulations**: Simulated environments powered by AI help students learn through practice, such as virtual science labs.

Limitations of the study:

The study is limited to Shikaripura Taluk undergraduate students. It may continue to other locality and other levels like higher and lower level education.

Conclusions:

Today, the amount of data that is generated, by both humans and machines, far outpaces humans' ability to absorb, interpret, and make complex decisions based on that data. Artificial intelligence forms the basis for all computer learning and is the future of all complex decision making.

Undergraduate students very familiarise about the usage of Artificial intelligence in their routine life. But teachers need to utilise this tools in their teaching learning process to update the knowledge of students.

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RELATIONSHIP OF TEACHING EFFECTIVENESS AND PROFESSIONAL ATTITUDE OF TEACHERS OF HIGH SCHOOLS OF KODAGU DISTRICT

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Abstract

Teaching effectiveness and professional attitude of teachers are the identities/ characters of a good teacher. Both are effecting on each other. In this study, the focus is to find out the relationship of Teaching effectiveness and professional attitude of teachers.   Stratified sampling technique has been adopted in this study. The sample of the study consisted of 300 teachers from the High schools of Kodagu District. Out of them, 150 were male and 150 were female. On the basis of locality out of 300 teachers, 150 were belonged to rural area and 150 belonged to urban area. The t- test and One way 'Analysis of Variance (ANOVA) was applied to test whether there is any significant difference exists between dependent variables and independent variables. Results of the study says that male Higher High school teachers were having more professional attitude than that of female teachers, urban and rural school teachers and different management school teachers are having almost equal Professional attitude.

***Key words**: High schools teachers, Teaching effectiveness, Professional Attitude and their relationship*

1. Introduction:

Education is as old as human race. Its period stretches from 'cradle to grave'. Man learns something every day and every moment. Hence, education is a continuous and dynamic process. It is continuous organization and integration of activities and experiences. Education in real sense is to humanize humanity and to make life progressive, cultural and civilized. It is very important for the progress of individual and society. Education is the entire process of learning that broadens a person's cognitive horizons. It provides knowledge to the person by the experiences he gains. The person who imparts such education is teacher. Hence we have concern about teacher's quality and his personal competency. This study reveals the relationship of professional attitude in relation to teaching effectiveness of High schools teachers.

2. Rationale of the problem:

The present study will have educational implications for pupil teachers and all who are interested in improving conditions, which affect professional attitude. It will relate the Teaching effectiveness with the professional attitude i.e. this factor affect professional attitude in positive or negative direction and up to which extent or one variable in one direction and other in opposite direction. By knowing affect of these factors, we can draw conclusion or get information how these factors help in improving professional attitude.

Professional attitude found as significant predictor of teacher effectiveness. In most of the studies professional attitude has been studied in relation to variables like gender, student's achievement, teaching behavior, self- esteem and teaching success. Teaching effectiveness found positively correlated with professional attitude and intelligence has found as component of professional attitude in most of the studies. Hence, the need for a study like the one in hand will be purported to see the relationship of professional attitude with other variable like Teaching effectiveness of Higher High School teachers.

The problem selected for the study intends to find out the different ways to improve professional attitude and its relation with teaching effectiveness. Although the independent work on these variables are available but not many co-relational studies on these variables conducted in India as yet. Most of the work has been done in foreign countries and empirical work is still wanted in India.

3. Title of the study

RELATIONSHIP OF TEACHING EFFECTIVENESS AND PROFESSIONAL ATTITUDE OF TEACHERS OF HIGH SCHOOLS OF KODAGU DISTRICT

4. Objectives of the study

1. To find out the level of professional attitude and Teaching effectiveness of High schools teachers
2. To study the Geographical factors (Sex and Locale of Schools) affecting on professional attitude and Teaching effectiveness of High schools teachers
3. To study the Geographical factors (type of management of Schools) affecting on professional attitude and Teaching effectiveness of High schools teachers
4. To study the difference and relationship between Professional attitude and Teaching effectiveness of High schools teachers

5. Hypotheses

1) $H_0 1$: There is no significant difference between professional attitude of Male and Female High schools teachers.
2) $H_0 2$: There is no significant relationship between professional attitude of Male and Female High schools teachers.
3) $H_0 3$: There is no significant difference between professional attitude of Urban and Rural High schools teachers.
4) $H_0 4$: There is no significant relationship between professional attitude of Urban and Rural High schools teachers.
5) $H_0 5$: There is no significant difference between professional attitude of Government, aided and Private High schools teachers
6) $H_0 6$: There is no significant relationship between professional attitude of Government, aided and Private High schools teachers
7) $H_0 7$: There is no significant difference between teaching effectiveness of male and female High schools teachers.
8) $H_0 8$: There is no significant relationship between teaching effectiveness of male and female High schools teachers.
9) $H_0 9$: There is no significant difference between teaching effectiveness of Urban and Rural High schools teachers.
10) $H_0 10$: There is no significant relationship between teaching effectiveness of Urban and Rural High schools teachers.
11) $H_0 11$: There is no significant difference between Teaching effectiveness of Government, aided and Private High schools teachers.
12) $H_0 12$: There is no significant relationship between Teaching effectiveness of Government, aided and Private High schools teachers.
13) $H_0 13$: There is no significant difference between professional attitude and Teaching effectiveness of Higher High School teachers.

14) $H_0$14: There is no significant relationship between professional attitude and Teaching effectiveness of Higher High School teachers.

6. Design of the study

1) Population

High schools teachers of Kodagu district constitute the population of the study.

2) Sample

Stratified sampling technique has been adopted in this study. The sample of the study consisted of 300 teachers from the High schools of Kodagu district. Out of them, 150 were male and 150 were female. On the basis of locality out of 300 teachers, 150 teachers were belonged to rural area and 150 belonged to urban area.

3) Tools used
   a. Professional Attitude Scale
   b. Teaching Effectiveness Scale

4) Statistical techniques applied for data analysis
   a. Means and Standard Deviations were calculated for the entire sample with respect to all the variables.
   b. The t- test and One way 'Analysis of Variance (ANOVA)' was applied to test whether there is any significant difference exists between dependent variables and independent variables i.e., Teaching effectiveness, professional attitude and with respect to the mediator variables namely Gender, Locale of School teachers experience and qualification, management of school were calculated eith the same
   c. Pearson's Product Moment Correlation is employed to find out the relationship between Professional attitude and Teaching effectiveness.
   d. The data has been analyzing by using Microsoft Excel package and SPSS (Statistical Package of Social Sciences) IBM version 20.0 was used.

7. Delimitations of the study
   1) The study was limited to High schools of Kodagu district only
   2) The study was limited to teachers of Social Studies only

8. Data Analysis and Interpretation

Analysis of the whole data was made in two sections:

1) Objectives-1: To find out the level of professional attitude, Teaching effectiveness of High schools Teachers

Table-1: The level of professional attitude and Teaching effectiveness of High schools Teachers

Variable	Type of Sample	N	Mean	SD
Professional attitude	Male	200	149.4	7.665
	Female	200	111.74	7.542
	Urban	200	130.68	17.772
	Rural	200	130.47	17.478
	Government	200	130.48	17.505
	Aided	200	130.74	17.714
	Private	200	130.5	17.715
Teaching effectiveness	Male	200	170.26	14.896
	Female	200	110.26	13.194

Urban	200	141.4	29.809
Rural	200	139.12	31.192
Government	200	140.09	30.549
Aided	200	140.56	30.444
Private	200	140.14	30.671

From above table we can come to the conclusion that:

1) Male Higher High school teachers were having more professional attitude than that of female teachers, urban and rural school teachers ad different management school teachers are having almost equal Professional attitude

2) Male Higher High school teachers were having more Teaching effectiveness, female teachers having lowest Teaching effectiveness, urban and rural school teachers and different management school teachers are having almost equal Teaching effectiveness.

Graph-1: The Comparison of professional attitude and Teaching effectiveness of High schools Teachers
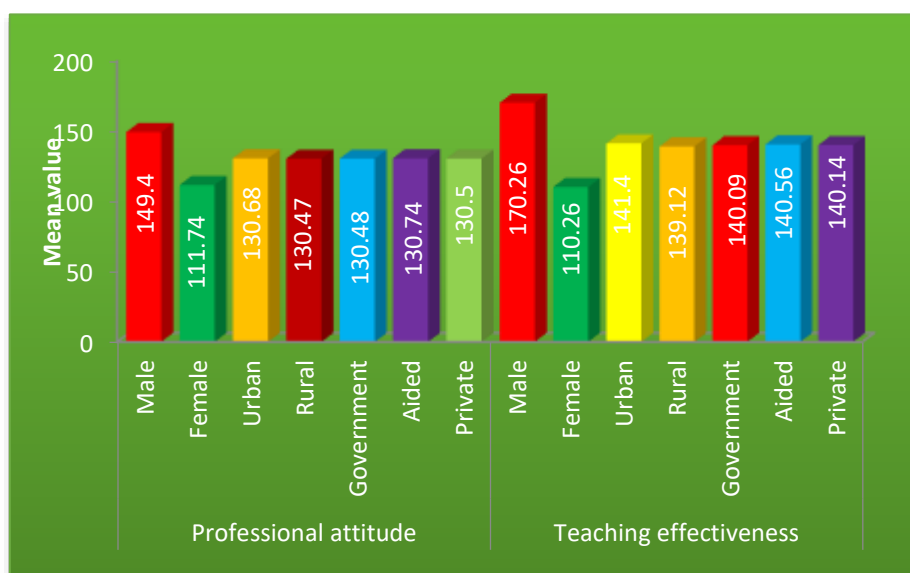
Section-II: Inferential analysis

Objectives-2: To study the Geographical factors (Sex and Locale of Schools) affecting on professional attitude and Teaching effectiveness of High schools teachers

Table-2: Mean, S.D. t-value and r-value of scores of professional attitude and Teaching effectiveness of Male/Female and Urban/Rural High schools Teachers.

Variable	Type of Sample	N	Mean	SD	't' Value	r-value
Professional attitude	Male	200	149.4	7.665	18.06	0.564
	Female	200	111.74	7.542		
	Urban	200	130.68	17.772	4.521	0.841
	Rural	200	130.47	17.478		
Teaching effectiveness	Male	200	170.26	14.896	12.34	0.784
	Female	200	110.26	13.194		
	Urban	200	141.4	29.809	5.61	0.842
	Rural	200	139.12	31.192		

From above table –2, it can be seen that all 't' and 'r' values were significant. Therefore the null hypothesis H_01, H_02, H_03, H_04, H_07, H_08, H_09, and H_010, were rejected and alternate hypotheses is accepted.

Objectives-3: To study the Geographical factors (type of management of Schools) affecting on professional attitude and Teaching effectiveness of High schools teachers

Table-3: Mean, S.D. f-value and r-value of scores of professional attitude of Government, aided and Private High schools Teachers.

Variable	Type of Sample	N	Mean	SD	'f' Value	r-value
Professional attitude	Government	100	130.48	17.505	7.123	0.845 (1&2)
	Aided	100	130.74	17.714		0.554 (1&3)
	Private	200	130.5	17.715		0.841 (2&3)
Teaching effectiveness	Government	100	140.09	30.549	6.721	0.871 (1&2)
	Aided	100	140.56	30.444		0.841 (1&3)
	Private	200	140.14	30.671		0.844 (2&3)

From above table -3, it can be seen that calculated values of 'f' values and r-values greater than table values hence hypotheses H_05, H_06, H_011 and H_012 were rejected and alternate hypotheses were accepted.

Objectives-4: To study the difference and relationship between Professional attitude and Teaching effectiveness High schools Teachers.

H_07: There is significant difference between professional attitude and Teaching effectiveness of High schools Teachers.

Table-4: Mean, S.D., t- value and r-value of scores of professional attitude, and Teaching effectiveness of High schools Teachers

Type of Sample	N	Mean	SD	't' Value	'r' Value
Professional attitude	200	134.48	17.505	8.912	0.864
Teaching effectiveness	200	148.14	30.671		

From above table and graph, it can be seen that 't' value is 8.912, which is significant. Therefore the null hypothesis, H_013 and H_014 that there is no significant difference between Professional attitude and Teaching effectiveness of Higher High School teachers, is rejected. Further from above table we can see that mean and SD scores of both the groups are not similar. It can thus be concluded that there is significant difference between Professional attitude and Teaching effectiveness of High School teachers.

Graph-2: Comparison of scores of professional attitude, and Teaching effectiveness of Secondary schools Teachers
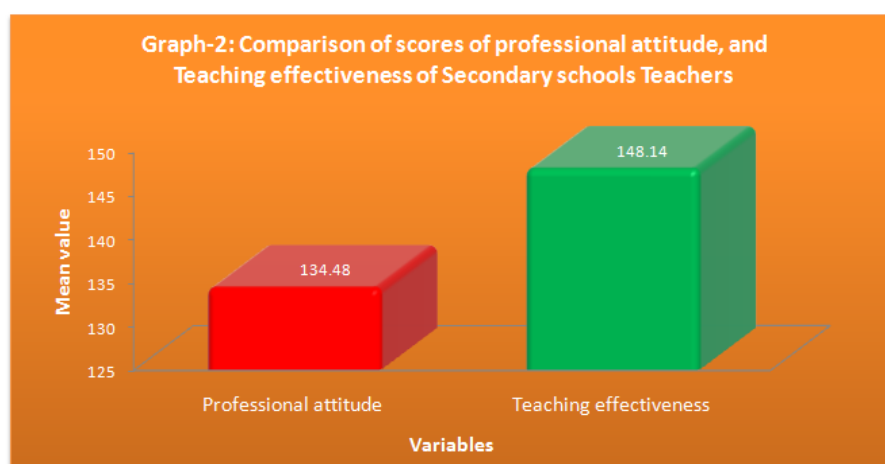
9. Findings:

1) There is significant difference between professional attitude of Male and Female High schools teachers.
2) There is significant relationship between professional attitude of Male and Female High schools teachers.
3) There is significant difference between professional attitude of Urban and Rural High schools teachers.
4) There is significant relationship between professional attitude of Urban and Rural High schools teachers.
5) There is significant difference between professional attitude of Government, aided and Private High schools teachers
6) There is significant relationship between professional attitude of Government, aided and Private High schools teachers
7) There is significant difference between teaching effectiveness of male and female High schools teachers.
8) There is significant relationship between teaching effectiveness of male and female High schools teachers.
9) There is significant difference between teaching effectiveness of Urban and Rural High schools teachers.
10) There is significant relationship between teaching effectiveness of Urban and Rural High schools teachers.
11) There is significant difference between Teaching effectiveness of Government, aided and Private High schools teachers.
12) There is significant relationship between Teaching effectiveness of Government, aided and Private High schools teachers.
13) There is significant difference between professional attitude and Teaching effectiveness of Higher High School teachers.
1) There is significant relationship between professional attitude and Teaching effectiveness of Higher High School teachers.

10. Educational Implications of the Study:

The following educational implications could be drawn from the findings of the study:

1) In-service programmes should be organized and carried out in a systematic way during the year to possess needed teacher competencies. Acquiring competencies depends on practice and time should be provided. The in-service training content, material, methodology and transactional approaches should be periodically updated as per the needs of the time.

2) Classroom instruction needs to be specific rather than general. The teachers should be given scope for developing initiative and dynamism which should lead to individual skill development.

3) Teacher competencies are stimulus for both in-service and pre-service. The acquisition and application of these mostly depends upon individual's aptitude.

4) There is relationship between professional attitude and Teaching effectiveness among Higher High School teachers hence teachers' professional attitude was directly affecting on his Teaching effectiveness.

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ISSUES IN CURRICULUM DEVELOPMENT IN B. ED

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Abstract

Curriculum development for Bachelor of Education (B. Ed) programs plays a crucial role in shaping future educators and addressing the developing needs of the education sector. This paper examines key issues in curriculum development, including preparation with national educational standards, Lack of sequence in the curriculum, Overlapping of content, Outdated curriculum unavailability of books, etc. Challenges such as insufficient participant engagement, limited resources, and the necessity for ongoing professional development for educators are also explored. By studying these factors, the study aims to highlight the importance of an active and responsive curriculum that not only prepares B.Ed. students for effective teaching but also promotes inclusive and equitable education. Recommendations for improving curriculum design and implementation are provided, emphasizing the need for cooperation among policymakers, educators, and institutions to foster a strong educational framework.

Keywords: Overlapping content, Outdated curriculum, Unavailability of books, overload of papers, Lack of sequence.

INTRODUCTION

Curriculum development refers to the systematic process of designing, implementing, and evaluating educational programs and materials. It Curriculum development involves creating a structured framework that outlines what students should learn, how they will learn it, and how their progress will be assessed.

1.   Needs Assessment
2.   Goal Setting
3.   Content Selection
4.   Instructional Methods
5.   Assessment

Overall, curriculum development aims to enhance the quality of education and ensure that learning experiences are relevant, engaging, and aligned with broader educational standards.

Definitions of curriculum development

•   **Rogers and Taylors**: "Curriculum development describes all how training or teaching organization plans and guides learning. This learning can take place in groups or with individual learners .it can take place inside or outside a classroom. It can take place in an institutional setting like a school, college training Centre, or a village or field. It is centred on the teaching and learning process."

•   **Dela Cruz**: "Curriculum development involves general aims, which the schools are to pursue and about which the more specific objective of instruction is attained."

Meaning of ISSUES

The term "issue" generally refers to a matter or topic of concern, debate, or discussion. It can encompass 1. Social or Political Issue 2. Legal Issue: 3. Publishing Issue: A particular edition or release of a publication, like a magazine or journal. 4. personal Issue: A concern or problem affecting an individual, such as emotional or interpersonal challenges. "issue" refers to any topic or problem that requires attention, discussion, or resolution.

•   To have difficulty or disagreement with someone or something.
•   To disagree strongly.

•   to give, supply, or produce something official.

Challenges Identified

•   **Curriculum is outdated**: Our present generation is learning the same knowledge that the previous two generations have learned. As students from different parts of the world, it's difficult for mathematical and scientific understanding through activity-based learning, our students are forced to learn scientific knowledge through cramming.

•   **Lack of Logical sequencing of topics**: A few of the units of core papers are not in proper sequence which restricts the appropriate flow of content in childhood and growing up theories of development are given in the first unit whereas their meaning and details are discussed in later units.

•   **Unavailability of Books:** The two-year course has introduced many new subjects like language across the curriculum, understanding discipline and subjects but the reference material and books related to them are not easily available. Suggested readings mentioned in the curriculum include books of mostly foreign authors which are difficult to access.

•   **Overlapping of content**: Overlapping can be seen in the content of various core papers. Many topics like gender stereotypes, inclusive education, etc. are repetitive in papers.

- **Educational Psychology**: Concepts related to learning theories may appear in both educational psychology courses and curriculum development classes.

    Curriculum and Instruction: Methods of teaching may overlap with subjects focused on specific content areas (like math or science), as both will address pedagogical strategies.

- **Assessment and Evaluation**: Topics on student assessment may overlap with courses on educational measurement, as both involve understanding how to evaluate student learning.
- **Inclusive Education**: Discussions about inclusive practices may be found in courses on special education as well as in general pedagogy classes.
- **Sociology of Education**: The impact of societal factors on education may be covered in both sociology and educational policy courses.
- **Classroom Management**: Strategies for managing a classroom might be discussed in both teaching methods courses and practical teaching experience seminars.

•   **In the 1st Semester of the M.Ed. program** - teacher education 3rd unit about functions of UGC. And In III rd. Sem educational management and administration 4th unit about functions of UGC.

•   **Content lacks demarcation**: The content given in the syllabus is vague in the sense that topics are not demarked or defined. The teaching of pedagogy has been divided into two semesters. The challenge related to this is that the B.Ed. Trainees will lose touch with the pedagogy.

•   **Preliminary School Engagement**: Now the challenges related to school engagement is that although the duration has been increased the activities which are supposed to be done are difficult to implement in schools. Also, during internships B.Ed. Trainees need to be in schools for 16 weeks, schools are apprehensive about allowing trainees to be in schools for such a long period as many schools feel the performance of their students will be badly affected and it will affect the overall result and reputation of the school.

•   Comparison between Indian B.Ed. Course and international B.Ed. course

•   Comparing Indian B.Ed. Courses with international B.Ed. Programs reveal several differences and similarities in structure, content, and approach to teacher education. Here's a breakdown:

Indian B.Ed. Course:	International B.Ed. Programs:
• Structure • Typically, a two-year program. • Often includes a mix of theoretical and practical components. • Curriculum mandated by the National Council for Teacher Education (NCTE). • Focuses on pedagogical theories, teaching methodologies, and school internships.	• Structure • Vary widely in duration (typically one to four years). • May be integrated with undergraduate degrees (e.g., BA/BSc with Education). • Often includes a strong emphasis on research, reflective practice, and international perspectives on education. • Curriculum Focus
• Emphasizes foundational knowledge in Indian educational philosophy and policies. • Covers subjects like child psychology, educational technology, and methods specific to subjects like Math, Science, etc. • Focus on local contexts and challenges in education.	• Incorporates global educational theories and practices. • May include specialized tracks (e.g., special education, ESL, curriculum design). • Encourages critical thinking and innovative teaching practices. • Practical Experience
• Requires a practical teaching component through school internships. • Students are often placed in local schools for hands-on experience.	• Typically include extensive practicum or field experiences. • May offer opportunities for internships in diverse educational settings, including international schools.
• Assessment often based on exams, practical, and project work. • Focus on theoretical knowledge and application in local contexts. • Primarily prepares students for teaching roles in schools across India. • May have limited exposure to international teaching opportunities.	• Assessment methods can be diverse, including portfolios, reflective journals, and peer evaluations. • Emphasis on ongoing assessment and self-reflection. • Career Opportunities • Often provides a broader range of career options, including educational leadership, curriculum development, and international teaching. • Graduates may find opportunities in various countries, including teaching abroad.

- **FINDINGS:** From the above observation theories
- Introducing basic practical knowledge about computers and technology because of different age levels in B.ED.

- Providing real classroom situations. For ex: fighting between the students, judging different difficult classroom situations etc.
- Clear Guidance about blueprint and evaluation.
- Students hesitate to ask for guidance from supervising teacher or a mentor.
- **Abhijit Halder 1 & Rimi Mondal2 & Roni Ghosh3 & Bubly Sarkar4 & Bijan Sarkar5 (2018):**
- 75% students said that textbook is not available according to new curriculum.
- 92.5% students expressed that college authority does not organized any seminar, workshop etc.
- 66.66% teachers feel insecure about the stability of their service.
- 83.33% Teachers highlighted that demonstration is problematic in new curriculum.
- 38% teachers said that the duration of the course is relatively longer.
- Researchers found maximum problems in non-Govt B.Ed. colleges. Students faced various problems in different aspects, like- Administration, Teachers, Curriculum, and Infrastructure etc. Teachers also faced various problems in Non-Govt B.Ed. College. They are not secured or satisfy in their service life. But the students and Teachers are more satisfied or faced fewer problems in the Govt. B.Ed. College.
- **Manpreet Kaur Sangha Ruchi Bajaj study**: While the new Curriculum is appreciable but there are few teachers who will be able to translate the very complex and vaguely stated outcomes of the curriculum appropriate into learning programmes.
- **G. A. Ayua & A. B. Danjuma (2021) study**: From the address These teachers in turn constitute blocks in wheels to achieving Basic Science aims and objectives in primary school. However, it should be noted that there will be no effective Primary (Basic) Science teaching without effective teacher education programme with suitable curriculum.
- **Neelofar Shaikh PhD. Scholar, S. Khurram Khan Alwi (2022) study**: existing B.Ed. English Language Curriculum and revise improve it for its effectiveness in developing students speaking and writing skills for effective communication in the English language. Perceptions of ELT Teachers about B.Ed. English Language Curriculum Regarding the Development of Students' Speaking & Writing Skills.
- **SUBHANKAR SAMANTA, MILAN MANDAL, DR. SANTINATH SARKAR:** It is very much clear that the attitude of the teacher educator towards curriculum transactions is not satisfactory due to the gap between theory and practice. Besides, the main motivational level for the positive curriculum transaction is very low for the cause of low job satisfaction and no scope in professional development.
- Curriculum Transaction is almost equal i.e. 70% of the teachers think that the curriculum prepared by NCTE and University is written well enough and will help to meet the specific objectives.
- 62 percent of the teachers feel that there are problems in the evaluation system. Even the time allotted for practical in the syllabus is not available.
- Majority of teachers i.e. 52% think the most important part is practicing microteaching skills students need.
- Besides, 20 percent of the teachers want Drama and Art part, and ICT skills need to be practiced more.

- Students to participate in four-month teaching internships have become obstacles in making the B.Ed. course effective.
- The context dimension revealed that the curriculum aims and outcomes are need specific for communication through speech and writing
- curriculum needs to be revised through the inclusion of objectives and a comprehensive evaluation scheme, proper and balanced focus on all the language skills in the content area and in evaluation criteria.
- Due to some contextual constraints guiding lesson plan is quite difficult.
- Such as students' language learning background, teachers' training, lack of time, lack of proper infrastructure to be implemented.
- **Prof. S.K. Tyagi Deepika Hurmade:** These findings suggest that
- NCTE should play a proactive role in monitoring the implementation of the B.Ed. curriculum regarding the nature of courses. Present study suggests the recruitment of special teachers on full time basis and think of making appointment on part time basis. Similarly, NCTE can revise its stand on 90% attendance of the student teachers in field engagement courses.
- For Curriculum Developer: implementation of B.Ed. curriculum in different universities and colleges due to unavailability of resources and feasibility of time. They should construct the curriculum of B.Ed. in such a manner which could be possible and at gross root level, so student teacher gets maximum opportunities in different academic programs and activities.
- Administrator B.Ed.: college face problems in arranging six-month internship program in schools. Various stakeholders like dept. of education of the states, Universities/Colleges, and school should sit together and devise strategies to ensure that schools are made available to every B.Ed. college for Internship. Ways and means should be explored to permit paid internship to the student teacher as is the case with engineering, medical and management interns.

CONCLUSION

• Students' problems regarding the new curriculum of B.Ed. Course. Researchers find some student's opinions towards their new curriculum. The textbook is not available according to the new curriculum., As the syllabus is too large, it is not possible to complete the whole syllabus in proper time. Teachers faced problems in the transaction of the new curriculum. The new curriculum is complicated. The new curriculum is overloaded by extra or excessive content. Practicum-based subjects are not taught properly in the B.Ed. College. The curriculum is overlapped. More importantly to educated they more widely about the complex cities intellectual and moral dimensions of classroom practice. It is very much clear that the attitude of the teacher educator towards curriculum transactions is not satisfactory due to the gap between theory and practice. The cause of low job satisfaction is no scope in professional development. The curriculum needs to be revised through the inclusion of objectives and a comprehensive evaluation scheme.

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THE IMPACT OF STEAM EDUCATION ON 21ST CENTURY SKILL DEVELOPMENT

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Abstract

STEAM education, incorporating Science, Technology, Engineering, Arts, and Mathematics, represents an innovative shift in modern teaching Example. Unlike traditional STEM approaches, which covers the area of technical skills, STEAM highlights creativity and critical thinking by integrating the Arts. This multilayered model assists a holistic educational experience that encourages students to think beyond standard academic boundaries. By using inquiry-based and project-based learning, STEAM nurtures students' curiosity, innovation, and collaboration. Students engage in real-world problem-solving, where science and technology are applied alongside artistic expression, standard a deeper understanding of both technical and creative concepts. For instance, a STEAM project might involve designing a sustainable city, blending architectural creativity with environmental science and technological tools.

The main benefits of STEAM education are more extensive . It increases student's creative thinking , problem solving , collaboration with each other and critical thinking abilities. It also engages underrepresented groups, particularly in STEM fields, by offering a more inclusive, engaging approach to learning. However, challenges such as the need for teacher training, resource constraints, and the development of new assessment of the existing models.

Looking ahead, STEAM education will play a crucial role in preparing students for future careers that demand both technical expertise and creativity. As the global workforce increasingly values innovation, the integration of the Arts with STEM subjects ensures that students are not only proficient in technical skills but also capable of thinking critically and creatively to solve complex challenges.

Description

Education is the foundation not just survival but growing in our rapidly changing world. To keep the speed, it needs to be more than just good, it must be comprehensive, sustainable and reach new heights of excellence. This isn't a one time fix, education must continuously evolve as a system ensuring consistency and the ability to grow and adapt.

This study investigates about the important usage of steam education

STEAM-> SCIENCE TECHNOLOGY ENGINEERING ARTS MATHEMATICS

this learning method design to improve and promote Critical thinking problem solving and collaboration earlier stem education is being used in the most of the countries now A (ARTS) also has been included

To encourage students in innovation and creativity in order to recognise essential skills in the modern world.

Among the most significant educational innovations in recent decades is **STEAM education**, which integrates **Science, Technology, Engineering, Arts, and Mathematics**. The STEAM framework motivates Diversified learning that puts-together analytical thinking with creativity, preparing students for careers in a wide range of fields while promoting essential life skills like collaboration, communication, and critical thinking.

STEAM was developed in 2006 by Georgette Yakman.Who then was a master graduated student at Virginia Polytechnic Institute and state Universities integrated Science Technology Engineering Mathematics educational program (ISTEMed)

STEAM education expands upon the well-known **STEM** (Science, Technology, Engineering, and Mathematics) model by incorporating the Arts. This addition of creativity and innovation is crucial in nurturing students who not only excel in technical knowledge but also in creative, design, and

humanistic skills. The rationale behind STEAM education is that the challenges and opportunities of the future will require more than technical expertise—they will demand the ability to innovate, adapt, and think creatively.

This introduction explores the origins of STEAM education, its key components, and its importance in the current and future educational landscape. Furthermore, it will touch on the benefits and challenges of implementing STEAM in schools, and the growing global movement to integrate STEAM principles into both formal and informal education settings.

The Evolution of STEAM Education

The roots of STEAM education can be traced back to the increasing emphasis on **STEM** subjects in the early 2000s. As technology rapidly advanced and industries began to shift toward more technical skill sets, the need for education in science, technology, engineering, and mathematics became more urgent. Governments and educators recognized that for students to succeed in a competitive global economy, they needed a strong foundation in these subjects.

However, as the focus on STEM grew, so did concerns about the lack of creativity and critical thinking that could arise from a purely technical approach to education. While STEM was effective in promoting technical literacy, there was growing recognition that creativity, communication, and human-centred design were equally important in innovation and problem-solving. This led to the inclusion of **Arts** in STEM, transforming it into **STEAM** education.

The addition of the Arts emphasises that innovation and discovery are not solely the domains of science and engineering. History shows that many breakthroughs in technology and engineering were made by individuals who brought a creative, artistic perspective to their work. For example, Leonardo da Vinci's work as both a scientist and an artist demonstrates how creativity fuels technological advancement. The **Arts** in STEAM do not only refer to visual arts, but include fields like music, drama, design, and the humanities, as well as broader concepts like creativity, communication, and cultural awareness.

Description STEAM Education is designed as Below

1: Diversified Learning: This helps today's to understand how the different Subjects are interconnected to each other and how students will relate them to the real world let us see above point how they are interrelated with real example

Construction of metro

Science this helps to understand the environment factors that are suitable for the construction of a metro

Geology & Environmental Science: Understanding soil types, groundwater levels, and seismic activity is critical in metro construction. Geotechnical investigations ensure that tunnels and stations are built on stable ground and that environmental impacts are minimised.

Physics: Concepts of mechanics, fluid dynamics, and material science are essential in designing tunnels, supporting structures, and ventilation systems.

Technology how we can eat lies the available resources and renewable energy

Tunnel Boring Machines (TBMs): These high-tech machines are used to excavate tunnels quickly and safely. TBMs are equipped with sensors and real-time monitoring systems to ensure accurate digging.

Automation and Control Systems: Modern metro systems rely on automation for train control, signalling, and operations. Technologies like SCADA (Supervisory Control and Data Acquisition) are used for real-time monitoring and management.

BIM (Building Information Modeling): 3D modelling technology is crucial in the planning and coordination of complex metro projects. BIM helps visualise the construction process and manage resources efficiently.

Engineering helps to design

Civil & Structural Engineering: Designing and constructing tunnels, stations, bridges, and tracks involves extensive civil and structural engineering. Engineers must ensure these structures are safe, durable, and able to withstand environmental pressures.

Mechanical & Electrical Engineering: Metro systems rely on intricate networks of mechanical and electrical components, including ventilation, air conditioning, escalators, lighting, and power supply systems. Electrical engineering is especially critical in ensuring the power distribution for the entire metro network.

Transportation Engineering: Optimising train routes, schedules, and capacities while ensuring smooth and efficient passenger flow through stations are essential tasks. This field incorporates principles of systems engineering and logistics.

Arts helps to think about cultural design about the city to attract more people to Utilise Metro

Aesthetic Design of Stations: Some metro stations are designed as architectural landmarks, featuring artistic elements like sculptures, murals, and creative lighting. These aesthetic considerations enhance the user experience and turn public transport hubs into cultural spaces.

Wayfinding and Public Art: Incorporating intuitive signage, artistic maps, and even public art installations in metro stations makes navigating the system easier and creates a pleasant visual environment for commuters.

Mathematics helps to calculate the resources

Optimization and Simulation Models: Mathematical models are used to simulate traffic flow, optimise metro routes, and determine the most efficient train schedules. Algorithms are also used to design cost-effective and resource-efficient metro projects.

Cost Estimation & Budgeting: Accurate mathematical calculations are required for budgeting, resource allocation, and cost control throughout the construction process.

Structural Analysis: Advanced mathematics is used in calculating load distribution, force vectors, and other factors critical to the structural integrity of tunnels and stations.

the above example shows that how they are interrelated to each other this helps the students to understand how they are influencing each other in the real world

2: Encourage creativity : The inclusion of Arts in stem makes to understand how the creativity impact The whole process without creativity the system looks like a mechanical way when creativity included then the system makes students to think with different ways with imagination and improve the system by providing better imaginary solution

3: Project based learning: project based learning apps student to collaborate and work together to achieve Aman goal this helps students to share and think about different ideas and put the address into action this makes students not only learn theory but also practically there applying their thoughts to make the project successful

Conclusion:

The role of STEAM (Science, Technology, Engineering, Arts, and Mathematics) education in fostering 21st-century skill development is not only transformative but essential in preparing students for the challenges and demands of an increasingly complex and interconnected world. STEAM education, by integrating the arts with the traditional STEM disciplines, offers a more holistic and interdisciplinary

approach to learning, cultivating a wide range of skills that are crucial for both personal and professional development.

One of the central impacts of STEAM education is its emphasis on critical thinking and problem-solving skills. By encouraging students to think creatively and approach problems from multiple perspectives, STEAM fosters the ability to analyse complex issues, synthesise information across disciplines, and develop innovative solutions. In contrast to rote memorization and passive learning models, STEAM engages students in hands-on, inquiry-based learning, which has been shown to increase engagement, retention, and understanding of complex concepts. The integration of the arts in STEAM further enhances these cognitive abilities, as it promotes lateral thinking and encourages students to consider aesthetic and design principles when solving problems.

As automation and artificial intelligence continue to reshape the workforce, there is increasing demand for workers who can think critically, solve complex problems, and work creatively with technology. STEAM education provides students with the skills they need to succeed in these emerging fields, helping to ensure that they are competitive in the global job market. Furthermore, the emphasis on innovation and entrepreneurship in many STEAM programs encourages students to think beyond traditional career paths and consider how they can create their own opportunities, whether through startups, social enterprises, or other innovative ventures.

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EMERGING TRENDS IN PEDAGOGY: TRANSFORMING TEACHING AND LEARNING

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Abstract

As the educational scenery continues to evolve, the field of pedagogy has observed an outpouring of innovative approaches and emerging trends that are reshaping the way we teach and learn. One of the most important developments in this field is the rise of transformational teaching and learning, which has gained significant attention from educator's researchers and students alike. This paper discovers the emerging trends in pedagogy, exploring into their definitions, types, and significance in the educational landscape. It studies the elements, benefits, challenges, and how innovative methods can transform teaching and learning experiences. The study highlights the importance of embracing emerging pedagogies to enhance educational outcomes and substitute lifelong learning.

Keyword: Emerging, Pedagogy, Teaching, Learning, Transforming

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Introduction

In an ever-evolving educational landscape, pedagogy plays a crucial role in shaping the learning experiences of students. Traditional teaching methods are being re-evaluated and enhanced with innovative approaches that provide to diverse learning needs. Transformational teaching, as outlined by (Slavich & Zimbardo, 2012), involves the making of dynamic relationships between teachers, students, and a shared body of knowledge, to promote student learning and personal growth. The modification towards a more student-centered, experiential, and problem-based approach to learning has been facilitated by the development of various pedagogical strategies, including active learning, collaborative learning, and constructivism (Tomljenović & Vorkapić, 2020). This paper aims to provide an in-depth analysis of emerging trends in pedagogy, their characteristics, and their potential to transform education. Understanding these trends is crucial for educators, policymakers, and stakeholders committed to improving educational outcomes.

Pedagogy

Pedagogy denotes the art and science of teaching. It involves the methods and practices used by educators to simplify learning. Pedagogy is about transmitting knowledge and creating an environment that inspires critical thinking, creativity, and the holistic development of learners.

Pedagogies in Education:- Pedagogies in education include various teaching methods and strategies used to impart knowledge and skills. These can be broadly classified into traditional and contemporary approaches. Traditional pedagogies often focus on teacher-centered instruction, while contemporary pedagogies highlight student-centered learning, collaboration, and the integration of technology.

Types of Pedagogies

- ➡ Constructivist Pedagogy: Emphasizes active learning where students build their understanding through experiences and reflection.
- ➡ Collaborative Pedagogy: Focuses on group work and cooperative learning activities.
- ➡ Inquiry-Based Learning: Encourages students to ask questions and follow answers through exploration and investigation.
- ➡ Blended Learning: Online digital broadcasting with traditional classroom methods.
- ➡ Differentiated Instruction: Tailors teaching methods to meet the diverse needs of students.

➡ Experiential Learning: Learning through direct experience and reflection on those experiences.

Traits of Emerging Pedagogies

→ Student-Centered Learning: To the needs, interests, and abilities of students.

→ Technology Integration: Utilizes digital tools to enhance learning experiences.

→ Interdisciplinary Approaches: Combines multiple subjects to provide a more holistic understanding.

→ Flexibility and Adaptability: Adapts to the changing needs of learners and the educational environment.

→ Personalized Learning: Customizes learning experiences to individual student's pace and style.

Emerging Trends in Pedagogies: -

A) Open Education-

Open education refers to educational practices that aim to remove barriers to learning, allowing access to educational resources, experiences, and opportunities to anyone, regardless of their background or location.

i)Elements of Open Education

✦ Open Educational Resources (OER)- Teaching, learning, and research resources that are freely available for anyone to use, modify, and share. Textbooks, course materials, lesson plans, videos, and software.

✦ Open Access Publishing(OAP)- Scholarly research and publications made freely available to the public. Open-access journals, repositories, and databases.

✦ Open Teaching Practices(OTP)- Teaching methods that promote transparency, sharing, and collaboration. Sharing lesson plans, co-teaching, and collaborative course design.

✦ Open Policies(OP)- Institutional or governmental policies that promote open access to educational resources and research. Mandates for open access to publicly funded research, policies supporting the use of OER.

✦ Open-Source Software(OSS)- Software with source code that anyone can review, modify, and enhance. Learning management systems (e.g., Moodle), and collaboration tools (e.g., Etherpad).

ii)Benefits of Open Education

→ To Increase Accessibility- Provides access to high-quality educational resources for anyone, anywhere, reducing barriers to education. Greater inclusion and opportunities for lifelong learning.

→ To Cost Savings: Reduces the cost of educational materials for students and institutions. Makes education more affordable and reduces financial burdens.

→ To Enhanced Collaboration- Encourages sharing and collaboration among educators, students, and institutions. Fosters a global community of practice and knowledge exchange.

→ To Adaptability and Customization - Allows educators to adapt and modify resources to meet specific teaching and learning needs. Supports personalized learning and improves educational outcomes.

→ To Promotion of Lifelong Learning: Provides resources and opportunities for continuous learning and professional development. Encourages lifelong learning and skill development.

iii)Challenges of Open Education

- ❖ Quality Assurance Challenge: Ensuring the accuracy, integrity, and quality of open educational resources. Implementing peer review processes, quality standards, and continuous improvement mechanisms.
- ❖ Technological Access Challenge: Ensuring that all learners have access to the necessary technology and internet connectivity. Providing infrastructure support, digital literacy training, and offline access options.
- ❖ Sustainability Challenge: Maintaining and updating open educational resources and initiatives over time. Developing sustainable funding models, institutional support, and community involvement.
- ❖ Intellectual Property and Licensing Challenge: Directing the complexities of copyright, licensing, and permissions. Promoting the use of open licenses (e.g., Creative Commons) and providing clear guidelines for users.
- ❖ Cultural and Institutional Resistance Challenge: Overcoming confrontation to change and adoption of open education practices. Raising awareness, demonstrating the benefits, and providing support and incentives for adoption.
- ❖ Equity and Inclusion Challenge: Ensuring that open education benefits all learners, including those from marginalized and underserved communities. Developing inclusive policies, resources, and practices that address diverse needs and contexts.

B) Gamification-

Gamification involves integrating game elements and principles into non-game contexts, such as education, to enhance engagement and motivation.

- ➤ Points -Numerical values awarded for completing tasks or achieving certain milestones. Provides immediate feedback and progress.
- ➤ Badges-Visual symbols of achievement or skill acquisition. Recognizes actions and motivates learners.
- ➤ Leaderboards- Ranked lists showing individuals' or teams' performance relative to others. Encourages competition and fosters a sense of achievement.
- ➤ Challenges/Quests- Specific tasks or responsibilities that learners must complete. Provides structured goals and keeps learners engaged.
- ➤ Incentives are given for completing tasks or reaching milestones. Motivates learners through perceptible or imperceptible benefits.
- ➤ Progress Bars- Visual pointers of how far learners have progressed towards a goal. Provides a sense of advancement and encourages determination.
- ➤ Storytelling/Narrative- Integrating a storyline to make the learning experience more engaging. Improves engagement by providing context and meaning to tasks.
- ➤ Levels- Stages or levels that represent different degrees of difficulty or achievement. Creates a structured pathway for learners to progress.
- ➤ Feedback- Information provided to learners about their performance. Guides improvement and keeps learners informed about their progress.

i)Benefits of Gamification

- → Increased Engagement-Makes learning more collaborative and fun. Higher levels of student participation and interest.

→ Enhanced Motivation- Uses rewards and recognition to motivate learners. Encourages learners to continue and achieve their goals.

→ Improved Retention- Engaging and interactive learning experiences can aid memory retention. Better understanding and recall of educational content.

→ Development of Problem-Solving Skills-Challenges and quests require critical thinking and strategy. Enhances learners' ability to solve problems and think critically.

→ Immediate Feedback-Provides learners with instant responses to their actions. Helps learners to understand their progress and areas for improvement.

→ Collaboration and Social Interaction-Multiplayer elements encourage teamwork and communication. Builds social skills and fosters a collaborative learning environment.

iii)Challenges of Gamification

➡ Overemphasis on Competition Challenge: May create a competitive environment that can discourage some learners. Balance competitive elements with collaborative activities and intrinsic rewards.

➡ Distraction from Learning Objectives: Learners might focus more on the game elements than the educational content. Ensure that game elements are closely aligned with learning objectives.

➡ Equity and Access: Not all learners have the same access to technology or may not respond well to gamified elements. Provide alternative pathways and ensure inclusivity in game design.

➡ Sustainability and Scalability: Developing and maintaining gamified learning experiences can be resource-intensive. Start with small-scale implementations and build capacity over time.

➡ Balancing Extrinsic and Intrinsic Motivation: Overreliance on rewards can undermine intrinsic motivation. Integrate intrinsic motivators such as autonomy, mastery, and purpose.

➡ Complexity of Design: Creating an effective gamified learning experience requires careful planning and design. Use design frameworks and collaborate with experts in game design and pedagogy.

C) Place-Based Learning-

Place-based learning connects learning experiences to the local environment and community, making education more relevant and engaging for students.

1) **Local Environment-** Utilizing the local natural and built environments as a context for learning. Examples: Parks, rivers, historical sites, community centers, and local businesses. Makes learning relevant by connecting it to students' immediate surroundings.

2) **Community Involvement**- Engaging local community members, organizations, and resources in the learning process. Examples: Guest speakers, community projects, partnerships with local businesses and organizations. Strengthens the connection between students and their community, fostering civic responsibility.

→ **Interdisciplinary Approach**- Integrating multiple subjects and disciplines to explore local issues and environments. For Example: Combining science, history, and art to study local ecology and culture. Provides a holistic understanding and encourages critical thinking across subjects.

→ **Experiential Learning**- Learning through hands-on, real-world experiences. For Examples: Field trips, outdoor activities, and service-learning projects. Enhances engagement and retention by involving students in active learning.

→ **Curriculum Integration**- Aligning place-based learning activities with educational standards and curricular goals. For Example: Designing projects that meet state or national learning

standards while focusing on local issues. Ensures academic rigor and relevance to standard educational outcomes.

→ **Reflection-** Encouraging students to reflect on their experiences and learning. For Examples: Journals, discussions, and presentations. Deepens understanding and personal connection to the material.

Benefits of Place-Based Learning

✓ Increased Relevance and Engagement-Connects learning to students' lives and communities. Makes education more meaningful and engaging, enhancing motivation.

✓ Improved Academic Outcomes- Provides context and application for academic concepts. Enhances understanding and retention of knowledge.

✓ Development of Critical Thinking and Problem-Solving Skills- Encourages students to investigate and address real-world problems. Builds analytical and problem-solving abilities.

✓ Fostering Community Connections- Strengthens ties between students, schools, and the local community. Promotes civic engagement and social responsibility.

✓ Enhanced Environmental and Cultural Awareness- Increases awareness and appreciation of local environments and cultures. Fosters environmental stewardship and cultural understanding.

✓ Personal and Social Development- Provides opportunities for collaboration, communication, and leadership. Supports social skills and personal growth.

Challenges of Place-Based Learning

♣ Logistical and Financial Constraints- Organizing field trips and community projects can be resource-intensive. Seek partnerships and grants, and plan cost-effective activities.

♣ Alignment with Standards and Testing- Integrating place-based learning with standardized curricula and assessments. Design projects that align with educational standards and demonstrate their academic value.

♣ Safety and Liability Concerns- Ensuring the safety of students during off-campus activities. Implement comprehensive risk management plans and obtain necessary permissions.

♣ Accessibility and Inclusivity- Ensuring all students can participate in place-based activities. Design inclusive activities and provide necessary accommodations.

♣ Teacher Preparation and Support- Equipping teachers with the skills and knowledge to effectively implement place-based learning. Provide professional development and resources for teachers.

♣ Community Buy-In- Gaining support and involvement from the local community. Foster strong relationships and communicate the benefits of place-based learning.

D) Virtual Field Trips-

Virtual field trips use digital technology to take students on simulated excursions to locations that might be otherwise inaccessible.

Elements of Virtual Field Trips

➢ **Virtual Reality (VR) and Augmented Reality (AR)-** Immersive technologies that create simulated environments or overlay digital information onto the real world. For Example: VR headsets for exploring ancient ruins, AR apps that enhance museum visits. Provides an immersive experience that closely replicates real-world environments.

➢ **Interactive Multimedia**: Use of videos, images, and audio to create engaging and informative content. For Examples: 360-degree videos, interactive maps, audio guides. Enhances engagement and provides diverse ways to experience content.

➢ **Live Streaming and Webinars- Real**-time broadcasts of events or locations with interactive elements. For Examples: Live tours of museums, Q&A sessions with experts. Offers real-time interaction and immediacy, making the experience more engaging.

➢ **Online Platforms and Tools**- Websites and applications designed to host virtual field trips. For Examples: Google Earth, virtual museum tours, educational platforms like Nearpod and Discovery Education. Provides easy access and navigation for virtual experiences.

➢ **Gamification Elements**-Incorporating game-like features to enhance engagement and learning. For Examples: Quizzes, scavenger hunts, achievement badges. Increases motivation and makes learning more interactive and fun.

➢ **Teacher Guides and Lesson Plans**- Structured guides to help teachers integrate virtual field trips into their curriculum. For Examples: Pre-trip activities, discussion questions, follow-up projects. Ensures that virtual field trips are educationally valuable and aligned with learning objectives.

Benefits of Virtual Field Trips

→ Increased Accessibility- Provides access to places that might be geographically, physically, or financially inaccessible. Ensures all students, regardless of location or ability, can experience diverse learning environments.

→ Cost-Effective- Eliminates the need for transportation, accommodation, and other expenses associated with physical field trips. Reduces costs for schools and families, making educational experiences more affordable.

→ Safety and Convenience- Reduce the risks and logistical challenges of organizing physical trips. Provides a safe and convenient way to explore and learn without leaving the classroom.

→ Enhanced Engagement- Uses interactive and multimedia elements to capture students' interest. Makes learning more engaging and enjoyable, which can enhance retention and understanding.

→ Flexibility and Adaptability- Allow for customization and flexibility in scheduling and pacing. Can be tailored to fit different curricular needs and learning paces.

→ Real-Time Interaction- Enables real-time interaction with experts and environments. Provides dynamic and interactive learning opportunities, fostering deeper understanding and curiosity.

Challenges of Virtual Field Trips

➢ Technological Requirements- Requires access to reliable internet and appropriate devices. Ensure that necessary technology is available and provide alternatives for those without access.

➢ Technical Issues and Glitches- Potential for technical problems that can disrupt the experience. Have technical support available and plan for troubleshooting.

➢ Engagement and Attention Span- Maintaining students' engagement and focus during virtual experiences. Incorporate interactive elements and vary activities to keep students engaged.

➢ Quality and Authenticity- Ensuring the virtual experience is as enriching and authentic as a physical visit. Use high-quality resources and supplement with additional activities and discussions.

➢ Learning Integration - Effectively integrating virtual field trips into the curriculum. Develop comprehensive lesson plans and follow-up activities that align with learning objectives.

> ➤ Teacher Preparedness- Teachers may need training to effectively use and integrate virtual field trips. Afford professional development and resources to support teachers.

E) Pedagogy of Care/Care-Based Pedagogy-

Care-based pedagogy emphasizes the importance of relationships, empathy, and emotional support in the educational process.

Elements of Care-Based Pedagogy

> ➤ Relational Emphasis- Focus on building strong, trusting relationships between teachers and students. Regular check-ins, personalized feedback, empathetic listening. Adopts a helpful learning environment where students feel valued and understood.
>
> ➤ Emotional Support- Addressing students' emotional and psychological needs as part of the learning process. Providing counseling resources, creating safe spaces for discussion, and incorporating social-emotional learning activities. Promotes emotional well-being, which is crucial for effective learning.
>
> ➤ Holistic Development- Supporting the overall development of students, including academic, social, emotional, and ethical growth. Integrating life skills education, community service projects, and mindfulness practices. Encourages balanced development and prepares students for life beyond the classroom.
>
> ➤ Inclusivity and Equity- Ensuring that all students, regardless of background, feel included and respected. Culturally responsive teaching, differentiated instruction, anti-bias education. Creates a learning environment where diversity is celebrated and all students have equal opportunities to succeed.
>
> ➤ Empathy and Compassion- Cultivating empathy and compassion within the classroom. Role-playing activities, literature that fosters empathy, and discussions on ethical and moral issues. Develops students' ability to understand and care for others.
>
> ➤ Collaborative Learning- Encouraging collaborative and cooperative learning experiences. Group projects, peer mentoring, and community-building activities. Builds a sense of community and teaches teamwork skills.

Benefits of Care-Based Pedagogy

> ❖ Enhanced Student Engagement- Students are more engaged when they feel cared for and valued. Leads to better attendance, participation, and overall academic performance.
>
> ❖ Improved Academic Outcomes- A supportive and caring environment can enhance learning and academic success. Higher grades, enhanced test scores, and increased motivation to learn.
>
> ❖ Better Mental Health- Addressing emotional needs reduces stress and anxiety. Leads to better mental health and well-being among students.
>
> ❖ Stronger Relationships- Builds stronger relationships between students and teachers. Creates a positive classroom climate and fosters mutual respect.
>
> ❖ Increased Resilience- Students develop resilience and coping skills. Better prepared to handle challenges both inside and outside of school.
>
> ❖ Promotion of Social Skills- Encourages the development of social and emotional skills. Better interpersonal relationships and communication skills.

Challenges of Care-Based Pedagogy

> ➤ Teacher Training and Preparation- Requires teachers to be trained in social-emotional learning and relational skills. Provide ongoing professional development and support for educators.

➤ Time and Resources- Implementing care-based practices can be time-consuming and resource-intensive. Allocate time and resources for planning and integrating these practices into the curriculum.

➤ Balancing Academic and Emotional Needs- Balancing the academic curriculum with the emotional and social needs of students. Integrate social-emotional learning into the academic curriculum.

➤ Measuring Success- Difficulty in quantifying and assessing the impact of care-based pedagogy. Use a combination of qualitative and quantitative measures to evaluate success.

➤ Cultural and Institutional Resistance- Resistance from traditional educational institutions and cultural norms. Advocate for the benefits of care-based pedagogy and demonstrate its positive impact.

➤ Scalability and Consistency- Ensuring consistent implementation across different classrooms and schools. Develop clear guidelines and frameworks to support widespread adoption.

F) Critical Digital Pedagogy- :

Critical digital pedagogy involves critically examining the use of digital tools and technologies in education, emphasizing equity, access, and the transformative potential of technology.

Elements of Critical Digital Pedagogy

❖ Critical Thinking and Reflection- Encouraging students to question and reflect on digital content and their own learning processes. Analyzing the credibility of online sources, reflecting on the impact of social media. Develops critical thinking skills and fosters a deeper understanding of digital environments.

❖ Inclusive and Equitable Practices- Ensuring that digital learning environments are accessible and inclusive for all students. Providing assistive technologies, designing inclusive curricula that consider diverse backgrounds. Promotes equity and access in digital learning spaces.

❖ Collaborative Learning- Encouraging collaboration and community-building in digital spaces. Online discussion forums, and group projects using collaborative tools like Google Docs. Nurtures a sense of community and enhances learning through peer interaction.

❖ Digital Literacy- Teaching students how to effectively and ethically use digital tools and resources. Lessons on digital citizenship, online research skills, and data privacy. Empower students to navigate and utilize digital environments responsibly.

❖ Critical Examination of Technology- Analyzing the social, political, and economic implications of technology. Discussions on data surveillance, digital divides, and the ethics of AI. Encourages students to understand and critique the broader impact of digital technologies.

❖ Student Agency and Voice- Prioritizing student choice and voice in the learning process. Allowing students to choose digital tools for projects, encouraging student-led discussions. Empowers students and makes learning more relevant to their interests and needs.

Benefits of Critical Digital Pedagogy

→ Enhanced Critical Thinking- Develops students' ability to critically analyze digital content and their own interactions with technology. Promotes deeper understanding and more thoughtful engagement with digital media.

→ Increased Digital Literacy-Equips students with the skills needed to navigate and use digital tools effectively. Prepares students for the demands of the digital age, enhancing both academic and professional prospects.

→ Greater Inclusivity and Equity- Ensures that all students, regardless of background, have access to digital learning opportunities. Promotes social justice and reduces educational inequalities.

→ Improved Collaboration and Communication- Encourages collaborative learning and effective communication in digital spaces. Builds teamwork skills and fosters a sense of community among students.

→ Empowerment and Student Agency- Gives students more control over their learning process and encourages active participation. Increases engagement and motivation, making learning more meaningful.

→ Awareness of Ethical and Social Issues- Raises awareness of the broader implications of digital technologies. Encourages responsible and ethical use of technology.

Challenges of Critical Digital Pedagogy

→ Access and Equity Issues- Not all students have equal access to digital tools and resources. Advocate for and implement policies that ensure equitable access to technology for all students.

→ Teacher Preparedness and Training- Educators may lack the skills and knowledge to effectively implement critical digital pedagogy. Deliver professional development and ongoing support for teachers.

→ Balancing Technology and Pedagogy- Ensuring that the use of technology enhances rather than detracts from pedagogical goals. Focus on pedagogically sound practices and critically assess the use of technology in the classroom.

→ Resistance to Change- Resistance from educators, institutions, or students accustomed to traditional teaching methods. Demonstrate the benefits of critical digital pedagogy through pilot programs and success stories.

→ Privacy and Security Concerns- Protecting students' privacy and data in digital environments. Implement strong data protection policies and educate students about online privacy and security.

→ Assessment and Evaluation- Developing effective methods to assess learning outcomes in digital and critical contexts. Use a variety of assessment tools, including formative assessments, digital portfolios, and reflective practices.

G) Transformational Learning-

Transformational learning is a process where learners undergo significant changes in their perspectives, leading to profound shifts in their understanding and behavior.

Elements of Transformational Learning

➡ Disorienting Dilemmas- Definition: Experiences that challenge existing beliefs and perspectives. Examples: Encountering conflicting viewpoints, critical incidents, or profound life changes. Purpose: Acts as a catalyst for self-examination and reassessment of assumptions.

➡ Critical Reflection-Reflecting deeply on personal beliefs, values, and experiences. Journaling, group discussions, self-assessment exercises. Helps learners' question and potentially revise their foundational assumptions.

➡ Rational Discourse- Engaging in open, honest dialogue to explore different perspectives. Debates, peer feedback sessions, Socratic seminars. Facilitates the exchange of ideas and supports critical examination of beliefs.

➡ Experience and Experimentation- Applying new perspectives through experiential learning and experimentation. Service learning, internships, role-playing activities. Reinforces new insights and allows learners to test and integrate new beliefs into their lives.

➡ Supportive Learning Environment- Creating a safe, supportive space for learners to express themselves and take risks. Mentoring, supportive peer groups, empathetic teaching practices. Encourages openness and vulnerability, essential for deep personal transformation.

➡ Action and Application- Taking informed action based on new perspectives and insights. Implementing a new teaching strategy, changing career paths, advocating for social justice. Solidifies transformation by incorporating new beliefs into practical actions.

Benefits of Transformational Learning

1. Deep Personal Growth- Facilitates profound changes in personal perspectives and worldviews that leads to greater self-awareness, emotional intelligence, and personal fulfillment.

2. Increased Critical Thinking- Encourages critical analysis and questioning of assumptions. Enhances problem-solving skills and the ability to think independently.

3. Enhanced Interpersonal Skills- Promotes empathy, active listening, and effective communication. Strengthens relationships and collaboration skills.

4. Greater Adaptability- Prepares learners to navigate and adapt to change and uncertainty. Increases resilience and flexibility in both personal and professional contexts.

5. Empowerment and Agency- Empower learners to take control of their learning and life choices. Adopts a sense of agency and self-efficacy.

6. Social Change and Advocacy- Inspires individuals to engage in social justice and advocacy. Contributes to positive social change and community development.

Challenges of Transformational Learning

➡ Emotional and Psychological Barriers- Confronting deeply held beliefs can be emotionally and psychologically challenging. Provide emotional support and counseling resources to help learners navigate these challenges.

➡ Resistance to Change- Learners may resist change due to fear, discomfort, or entrenched beliefs. Foster a supportive and non-judgmental environment that encourages openness to change.

➡ Facilitator Skills and Training- Effective facilitation of transformational learning requires specific skills and training. Invest in professional development and training for educators and facilitators.

➡ Time and Resources- Transformational learning processes can be time-consuming and resource-intensive. Allocate sufficient time and resources to support deep learning experiences.

➡ Measuring Impact- Assessing the outcomes of transformational learning can be difficult. Use a combination of qualitative and quantitative assessment methods to evaluate impact.

➡ Institutional Constraints- Traditional educational structures and policies may not support transformational learning. Advocate for institutional changes that prioritize and support transformational learning practices.

H) Maker Spaces-

Maker spaces are collaborative workspaces equipped with tools and materials for hands-on projects, encouraging creativity, innovation, and problem-solving.

Elements of Maker Spaces

→ Hands-On Tools and Equipment- Physical tools and machinery used for creating and building projects. 3D printers, laser cutters, woodworking tools, and electronics kits. Provides practical experience in making and prototyping.

→ Creative Materials- Various materials used for constructing projects. Craft supplies, robotics components, fabrics, and metal sheets. Encourages experimentation and creativity in project design and construction.

→ Collaborative Workspaces- Areas designed to support group work and collaborative projects. Group tables, project stations, communal workbenches. Facilitates teamwork and shared learning experiences.

→ Mentorship and Guidance- Support from knowledgeable individuals who provide expertise and assistance. Educators, industry professionals, and experienced makers. Offers guidance, skill development, and inspiration.

→ Technology and Digital Tools- Digital devices and software used for design and fabrication. Computers with CAD software, digital fabrication tools, programming environments. Integrates technology into the making process and expands creative possibilities.

→ Flexible and Open Design- A design approach that allows for customization and adaptation. Modular workstations, adaptable project setups, open-ended project guidelines. Accommodates a wide range of projects and individual preferences.

→ Educational Resources- Materials and resources that support learning and skill development. Tutorials, instructional books, online courses. Provides learning opportunities and supports skill acquisition.

Benefits of Maker Spaces

✓ Enhanced Creativity and Innovation- Encourages imaginative thinking and problem-solving. Promotes the development of new ideas and innovative solutions.

✓ Practical Skill Development- Provides hands-on experience with tools and technologies. Builds practical skills that are applicable in various fields, including STEM and arts.

✓ Collaboration and Teamwork- Facilitates collaborative projects and team-based learning. Enhances communication skills and promotes the development of a sense of community.

✓ Engagement and Motivation- Creates engaging learning environments that motivate students. Increases enthusiasm for learning and personal investment in projects.

✓ Problem-Solving Abilities- Encourages experimentation and iterative problem-solving. Develops critical thinking and resilience in overcoming challenges.

✓ Integration of Technology and Design- Combines traditional making with digital tools and technologies. Expands possibilities for creativity and prepares students for tech-driven industries.

✓ Personalized Learning- Allows learners to pursue projects aligned with their interests and skills. Supports differentiated learning and individualized educational experiences.

Challenges of Maker Spaces

➡ Resource and Equipment Costs- High costs associated with acquiring and maintaining tools and materials. Seek grants, sponsorships, and community support to fund maker space resources.

➡ Space and Facility Constraints- Limited physical space and facilities can restrict the scope of activities. Optimize existing space and explore modular or mobile solutions.

➡ Training and Skill Development- Ensuring that users have the necessary skills to effectively use the equipment. Afford training sessions, workshops, and ongoing support.

➡ Safety and Supervision- Ensuring safe use of equipment and maintaining proper supervision. Implement safety protocols, provide safety training, and supervise activities.

➡ Integration with Curriculum- Aligning maker space activities with educational objectives and standards. Develop curriculum connections and project-based learning opportunities that integrate maker space activities.

➡ Sustainability and Maintenance- Ongoing maintenance and sustainability of equipment and materials. Establish maintenance schedules and budget for long-term upkeep.

➡ Community and Cultural Barriers- Ensuring that the maker space is inclusive and accessible to diverse groups. Promote inclusivity through outreach, diversity initiatives, and adaptive resources.

Trends and Future Directions of Pedagogy

1. Student-Centered Learning: Emphasizes the importance of tailoring education to the individual needs, interests, and abilities of each student.

Encourage energetic learning, critical thinking, and student autonomy.

2. Technology Integration: Expands access to educational resources and opportunities for collaboration and innovation.

Utilizes digital tools to support personalized learning and interactive experiences.

3. Interdisciplinary Approaches: Integrates multiple subjects to provide a more holistic understanding and relevance to real-world problems.

Promotes critical thinking and problem-solving skills.

4. Experiential and Inquiry-Based Learning: Focuses on learning through experience, exploration, and inquiry. Inspires students to take an active role in their learning process.

5. Lifelong Learning: Recognizes the importance of continuous learning beyond formal education.

Promotes adaptability, critical thinking, and the ability to learn independently.

Conclusion

Emerging trends in pedagogy represent a significant shift in educational practices, aiming to create more effective and meaningful learning experiences. By understanding and implementing these innovative approaches, educators can better meet the needs of their students and prepare them for the future. As the educational landscape continues to evolve, staying informed about these trends will be essential for fostering a culture of continuous improvement and excellence in education.

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EMOTIONAL INTELLIGENCE AND LEADERSHIP

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Abstract

Emotional intelligence is inevitable for unique leadership. It impacts decision-making and social skills. Leaders with high emotional intelligence balance rationality with emotional understanding, creating a culture of transparency and collaboration. This paper explores the importance of emotional intelligence in effective communication, conflict resolution, motivation, and decision-making. Developing emotional intelligence requires selfawareness, empathy, and constant self-reflection. Exceptional leaders who foster a culture of excellence inspire, motivate, and elevate their teams. Emotional intelligence is a driving force behind the success of leaders and their organizations.

Keywords: *Emotional Intelligence, Leadership ,Self-awareness, Empathy, Social skills, Self regulation, Motivation.*

Introduction

Leadership decisions affect an organization's strategic direction and team members' emotions and well-being. Emotionally intelligent leaders excel in making decisions that balance rationality and emotional intelligence, considering the facts and figures and the emotional implications of those decisions. It ensures that their choices connect with the aspirations and concerns of their teams, prompting greater support and commitment. Emotionally intelligent leaders can adjust to changing circumstances with agility and grace, responding effectively to unforeseen challenges, seizing opportunities, and remaining resilient in adversity. considerations, creating solutions that vibrate not only with the facts and figures but also with the emotions of their teams. They understand that emotions play a crucial role in how individuals perceive and respond to decisions, and they consider their team members' emotional well-being, motivation and commitment when making choices.

Leaders who possess emotional intelligence can effectively motivate and engage their workforce to achieve heightened levels of productivity and innovation. Creating a work environment where every team member feels valued and understood fosters a sense of belonging and commitment beyond the ordinary. Moreover, emotionally intelligent leaders can turn conflicts into opportunities for growth and understanding by addressing emotional triggers with empathy and tact. Even during uncertain or challenging times, they remain steadfast and resilient, providing much-needed stability and instilling confidence in their teams and stakeholders. As leaders harness the power of emotional intelligence in their decision-making processes, they transform themselves into insightful and empathetic creators of success. Decision-making incorporating emotional intelligence goes beyond the mere transactional and ventures into deep human understanding. These decisions strike a chord with the emotions and aspirations of their teams, creating a ripple effect of positivity and commitment. Leadership decisions affect an organization's strategic direction and team members' emotions and well-being. Emotionally intelligent leaders excel in making decisions that balance rationality and emotional intelligence, considering the facts and figures and the emotional implications of those decisions. It ensures that their choices connect with the aspirations and concerns of their teams, prompting greater support and commitment. Emotionally intelligent leaders can adjust to changing circumstances with agility and grace, responding effectively to unforeseen challenges, seizing opportunities, and able to with stand quickly from difficult conditions.

Developing emotional intelligence is a journey that requires a lot more than just some   basic steps. It involves continuous self-reflection, self-improvement, and refinement of interpersonal skills. Leaders need to be open to feedback and self-assessment. They should actively explore techniques to manage their emotions while improving their ability to recognize and respond to the emotions of others. This constant growth leads to a leadership style characterized by authenticity, empathy, and adaptability–a style that deeply resonates with team members, encourages their potential, and drives the organization toward greater heights of success.

Leaders who understand and develop emotional intelligence have a unique advantage in achieving success on a large scale. Emotional intelligence lets them perceive emotions beyond the surface and inspire their teams to reach new heights. It also enables them to make decisions that resonate with the heartbeats of their organizations rather than just relying on facts and figures. Leaders with emotional intelligence are skilled in navigating emotions in the workplace, such as enthusiasm, collaboration, and conflict. Embracing emotional intelligence as an ongoing process creates a culture of excellence within their organizations. They know that mastering emotions is a journey of self-awareness, empathy, and growth that requires continuous effort.In today's fast-paced and constantly evolving world, where leadership is both an art and a science, emotional intelligence has become the essential element distinguishing exceptional leaders. It goes beyond industry and organization boundaries, creating a universal language that resonates with the human spirit. Emotional intelligence is a quality that enables leaders not only to achieve success but also to inspire, motivate, and elevate those they lead. When leaders embrace the ongoing and ever-changing process of developing emotional intelligence, they embark on a transformative journey for themselves and the entire organization. This journey leads to extraordinary outcomes, long-lasting impact, and a culture where excellence thrives.

Emotional intelligence

Emotional intelligence or EI is the ability to recognise, understand and handle your own emotions, and those of the people around you. People with a high degree of emotional intelligence know what they are feeling, what their emotions mean, and how these emotions can affect other people.

The original definition, as coined by the team of Salovey and Mayer (1990) is: emotional intelligence (EI) refers to the collection of abilities used to identify, understand, control and assess the emotions of the self and others. According to Daniel Goleman, an American psychologist who helped to popularize emotional intelligence

The ability to connect emotionally with employees and lead with emotional intelligence is essential for leadership effectiveness. In part, that's because the way a leader makes you feel can impact your engagement, as well as your productivity. Emotions can weave through every work situation you experience, including: Change and uncertainty, Interactions with colleagues, Conflict and relationships, Effort and burnout, Achievement and failure

The Significance of Emotional Intelligence in Leadership

Emotional intelligence has recently become one of the key talking points when it comes to leadership. One thing we know for sure is that it is a trait that can be measured and developed. But what exactly is it and how does it influence the concept of leadership as we know it today?

Emotional intelligence has to do with one's ability to both recognise and control their own emotions, while harnessing said emotions appropriately to have the most optimum reaction as situations dictate. It also has to do with one's awareness of and sensitivity towards others' emotions.

Emotional intelligence is therefore an important characteristic for anyone at any level of an organisation but it is particularly important for those who occupy positions of leadership. A leader's emotional

intelligence can have sweeping influence over their relationships, how they manage their teams, and all in all how they interact with individuals in the workplace.

Developing emotional intelligence

It is a continuous journey that can greatly enhance leadership capabilities. This journey involves ongoing self-discovery and growth, enabling leaders to handle the complexities of their roles more skillfully. Self-awareness is the foundation of emotional intelligence, which involves recognizing and understanding one's emotions. Leaders must be able to understand their own emotions to make conscious choices to understand their perspectives, emotions, and needs.

Self-awareness: It is the foundation of emotional intelligence, serving as the basis upon which all other aspects of this crucial skill are built. This crucial strengths, weaknesses, and triggers, enabling them to respond more effectively in various leadership situations.To be self-aware means you have a thorough recognition of your personal strengths and weaknesses. You know when to step back and question your emotional state and thoughts before acting.

Empathy: It is a fundamental aspect of emotional intelligence and is essential to personal development. To become a leader with high emotional intelligence, you should actively cultivate empathy. It is not just about understanding others' perspectives but about feeling and connecting with them. This involves actively listening to team members, colleagues, and stakeholders, with a committed effort to comprehend their emotions, needs, and points of view. Empathetic leaders aim to put themselves in others' shoes, embracing their joys, fears, and concerns. Emotionally intelligent leaders can walk in another person's shoes. Knowing what someone is going through helps to understand them better. It's why empathy is a key component of successful leadership. Understanding managers are approachable, and they listen. The upshot of that is engaged teams and harmonious workplace cultures.

Self-Regulation : To self-regulate is to turn negative thoughts and feelings into positive ones and know when to pause between emotions and subsequent actions. A leader who self-regulates can channel negative emotions in a productive rather than a destructive manner. This positive outlook makes it easier to solve problems with a cool head.Self-regulation is a critical skill for effective leadership, allowing you to express yourself appropriately and calmly in front of your team. And the more resilient you become, the faster you recover from setbacks. You become more conscientious, flexible in your approach and comfortable with change.Self-regulation doesn't mean you suppress your natural emotions or hide true feelings. It's simply a skill used to express yourself more appropriately. The goal is to avoid panic and manage stressful situations in a composed manner.

Self-Motivation: Self-motivation is a critical component of emotional intelligence for leaders. No team will be at its best if its leader lacks internal motivation. A driven manager is passionate, dedicated, and highly focused on achieving goals. Motivated managers exude an optimistic disposition, and optimism is infectious, lifting employee morale and drive.A self-motivated leader is very action-orientated. They continuously set high goals and have a genuine desire to achieve them. That means you never graduate or reach the top of your tree because you have a constant internal strive to be more and do better.To succeed as a leader, visualize self in a positive light even when things don't go well, viewing complications as setbacks and learning opportunities instead of failures. You keep a clear vision of what you want and how to achieve it. And to maintain motivation, you continually set new goals and relish new challenges.

Social Skills: Comfortable interaction is another core component of EQ. Leaders with good social skills are very approachable, easy to talk to, and therefore strong team players. Effective communication is important for leaders as it helps build meaningful, mutually respectful relationships.

Emotional intellegence leaders

Leaders who are emotionally intelligent foster safe environments, where employees feel comfortable to take calculated risks, suggest ideas and to voice their opinions. In such safe environments, working collaboratively isn't just an objective , but it gets woven into the organisational culture as whole.

When a leader is emotionally intelligent, they can use emotions to drive the organisation forward. Leaders often have the responsibility of effecting any necessary changes in the organisation, and if they are aware of others' possible emotional reactions to these changes they are able to plan and prepare the most optimal ways to make them.

Furthermore, emotionally intelligent leaders don't take things personally and are able to forge ahead with plans without worrying about the impact on their egos. Personal vendettas between leaders and employees are one of the commonest hindrances to productivity in many workplaces.

However, a leader who lacks emotional intelligence doesn't necessarily lash out at their employees. Not being emotionally intelligent can also mean an inability to address situations that could be fraught with emotion. Most leaders deal with conflict, and a leader who isn't clued into others' emotions will often have a difficult time recognising conflict in the first place let alone dealing effectively resolving it.

Tips for Leading With Emotional Intelligence

To be more empathetic, and to drive higher engagement in the workplace, you will want to increase your emotional intelligence quotient.Taking the following actions will help you build your emotional intelligence and leadership effectiveness.

☐ Listen closely and with hold judgement

It all starts with having strong active listening skills, and striving to try to see the world as others see it. Really listen to, and consider, their perspective, keeping your attitude as open as possible to create a safe space for sharing and a sense of psychological safety at work.Work to understand the other person's feelings and reflect them back to the person. As you listen, pay close attention to the values and emotions behind the facts themselves. Communicate your understanding of that person's feelings to assure people that their feelings and values are really understood.

☐ Connect with employees on a personal level

When you demonstrate a willingness to help your employees and to recognize their efforts, you are leading with emotional intelligence, showing that you care about them as individuals. This act of caring builds trust between leaders and their employees.Empathy has long been a soft skill that's overlooked as a performance indicator. Our research, however, has shown that today's successful leaders are showing kindness in the workplace and are more "personfocused," making them better able to work well with people from varying teams, departments, countries, cultures, and backgrounds.

☐ Unlock motivations

As important as compensation and benefits are, we know they are not the only things that matter when it comes to keeping employees productive and engaged. These benefits are a part of a larger motivation equation. Most of the time, understanding what motivates your employees is as easy as asking them and really listening to their responses. Once you understand your employees' motives, you can boost employee engagement and motivation, increase job satisfaction, and improve retention.

☐ Seek to understand more about others and yourself

Leading with emotional intelligence requires managers to harness the power of their employees' diverse experiences and consider people's different lived experiences to help their teams achieve their full potential.

Building those skills requires understanding how aspects of identity can affect the way you lead, and a willingness to learn and recognize your own emotional triggers and weaknesses. Leader effectiveness is constrained or amplified based on how well leaders understand themselves, their awareness of how others view them, and how they navigate the resulting interactions.

So, intentionally increasing your self-awareness is sure to help you improve your emotional intelligence and leadership effectiveness.

Conclusion

Emotional intelligence plays a crucial role in effective leadership. Leaders with emotional intelligence have an edge in making sound decisions, managing group dynamics, and overall leadership effectiveness. The relationship between emotional intelligence and group dynamics highlights the significance of establishing a culture of transparency, trust, and collaboration, ultimately leading to stronger relationships and a harmonious work environment. Emotional intelligence plays a crucial role in leadership effectiveness and can bring about significant transformations within organizations. Leaders with emotional intelligence create a conducive environment for their teams, where engagement thrives and everyone is motivated by a shared sense of purpose. They are also skilled in navigating conflicts, turning disagreements into agreements, and maintaining stability during crises. Emotional intelligence is the catalyst that enables leaders to transcend traditional boundaries.One other reason that leading with emotional intelligence is so important: when an entire organization is full of people leading with emotional intelligence front and center, it can create a stronger culture.culture of trust, resilience, and limitless achievement.

Emotional intelligence has become a crucial factor that sets apart exceptional leaders in today's rapidly evolving world. It goes beyond industry and organizational boundaries and empowers leaders to achieve success by inspiring, motivating, and elevating those they lead. Developing emotional intelligence. Embracing the continuous process of developing emotional intelligence.leads to extraordinary outcomes and a culture where excellence flourishes. Overall, emotional intelligence is a driving force behind the success of exceptional leaders and their organizations. Thus, effective group dynamics rely on leaders utilizing emotional intelligence to manage complex interactions. Leaders with emotional intelligence skills can create robust and cohesive teams that communicate effectively, resolve conflicts constructively, and stay motivated to achieve shared goals. Emotional intelligence is the key to unlocking the full potential of teams, allowing them to navigate challenges and opportunities with resilience and creativity.

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A STUDY ON THE RELATIONSHIP BETWEEN SELF-EFFICACY AND TECHNO-PEDAGOGY SKILLS AMONG STUDENT TEACHERS

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Abstract

Teachers have to be willing to swiftly and successfully shift to the ever-changing problems in order to meet the requirements and demands of the modern society. It's time for student teachers to adopt new pedagogical strategies in order to meet the demands of learners in the twenty-first century. Thus, this paper attempts to comprehend the important connection between student teachers techno-pedagogy abilities and Self-Efficacy. Samples included 980 student teachers from India, Karnataka state. In addition, 980 student teachers, 275 male and 705 female were chosen at random from Teacher Education Colleges connected to VSK University in Ballari, India. The scale was one of the data gathering tools. (1) Self-Efficacy: Researcher-constructed scale. (2) Techno-pedagogy scales: Prof. Hemant Lata Sharma and Ms. Leena Sharma designed the scale. (3) Schedule of personal information. Face-to-face interviews were used to gather information from the researcher and stratified random sampling was used. Utilizing statistical methods like ANOVA, 't' test, mean, standard deviation, and others helped analyse the data. The current study's findings demonstrated the relationship and mutual effect between college student teachers Self-Efficacy scores and techno pedagogy measures.

***Key Words:** Self-Efficacy, Techno-Pedagogy, Male, Female and Student-teachers.*

Introduction:

Self-Efficacy is the term used to describe how someone feels about their ability to exhibit particular behavior (Bandura 1978). Self-Efficacy theory, which asserts a significant correlation between an individual's behavior, environment, and cognitive traits like outcome expectancies and Self-Efficacy, is a key component of Bandura's (1986) broad social cognitive theory. A personality attribute known as perceived Self-Efficacy enables educators to effectively set and tenaciously pursue lofty personal goals in addition to improving student outcomes.

Beliefs about one's own efficacy impact an individual's drive, feelings, and actions. These beliefs influence their motivational, emotional, and cognitive processes.
Studies on the development of Self-Efficacy show that efficacy assessments are most malleable in the early stages of skill mastery and grow more fixed with experience, provided that the task and context are suitably stable. It seems to reason that early learning experiences would have a significant impact on efficacy evaluations. Good early experiences help new teachers in overcoming the expected setbacks and discouragements of their college teaching careers. On the other hand, a poor start to their time in the classroom may discourage a prospective teacher. Taken as a whole, the findings previously cited suggest that instructors have ideas, especially beliefs about their own Self-Efficacy. This is an enough justification to carry out further study in this field and consider the most effective ways to support teachers' growth in Self-Efficacy through professional development and teacher education. Self-Efficacy is a key component in establishing teaching ability.

Need and Significance of the Study

As the information era dawns, teacher preparation programs need to prepare teachers to deal with quickly changing technology settings and to act as leaders in the development of better instructional strategies and tools. Teaching professionals need to be computer savvy in order to spark students' interest and motivate them to take on new challenges.

Giving student instructors the skills and knowledge they need to properly utilize and integrate technology is the primary goal of teacher education. Teachers in the twenty-first century should apply techno-pedagogical skills in teacher education, since they are the only ones who can create a route toward an improved future for both students and teacher candidates. Using techno-pedagogy to promote fairness, accessibility, and high-quality teacher preparation may have a big influence on education as a whole.

Scope of the Study

The main intention of the present study is to study the significant relationship between Self-Efficacy and Techno-Pedagogy Skills among male and female student-teachers.

Meaning of Self-Efficacy:

Self-Efficacy refers to a person's assessments of their capacity to carry out specific behaviours (Bandura 1978).

Self-Efficacy theory, which asserts a significant correlation between an individual's behavior, environment, and cognitive traits like outcome expectancies and Self-Efficacy, is a fundamental component of Bandura's (1986) broad social cognitive theory.

Meaning of Techno-Pedagogy:

Specifically, the terms "techno" and "pedagogy," which refer to the art-science of teaching and the art-skill of handcrafting, respectively, are derived from the Latin "texere" (to weave or create). Techno is a qualification in this context; it either crosses or intersects the definition of "pedagogy." Techno-pedagogy, or the integration of teaching methods into the actual learning environment.

Objectives of the study

1. To study the significant relationship between Self-Efficacy and Techno Pedagogy skills among student teachers.
2. To study the significant relationship between Self-Efficacy and Techno-Pedagogy skills among male and female student teachers society.

Hypothesis of the study

1. This is no significant relationship between Techno-Pedagogy skills with Self -Efficacy scores of student teachers.
2. This is no significant relationship between Techno-Pedagogy skills with Self -Efficacy scores of male student teachers.
3. This is no significant relationship between Techno-Pedagogy skills with Self -Efficacy scores of female student teachers.

Sample:

There are 980 student teachers in the sample. Of the 980 student teachers at Teacher Education Colleges in the districts of Ballari, Koppal, and Vijayanagar, Karnataka, India, 705 were female and 275 were male. The Ballari campus of Vijayanagara Sri Krishnadevaraya University is connected with these teacher education institutions. In this study, random sampling was employed in Karnataka, India.

Methodology:

The researcher used a descriptive research approach under correlation and casual comparative research to determine the independent variable (Self-Efficacy) on the dependent variable (techno-pedagogy skills) in the current study.

Tools of the Study:

The following tools were used by the current study investigator to collect data.

a) Self-Efficacy Scale: The researcher developed this scale.

b) Techno-Pedagogy Skills: Ms. Leena Sharma and Investigator Prof. Hemant Lata constructed and standardized the scale.

c) Personal Information Schedule: The investigator prepared this one.

Analysis and Discussion of the Results:

The investigator in this study analysed data using SPSS 23 version, computing 't', mean, and 'r' values.

Result and Discussion:

Hypothesis 1: There is no significant relationship between techno-pedagogy skills with self-efficacy scores of student teachers.

Table 1: Results of correlation coefficient between Techno-Pedagogy skills and its dimensions with Self-Efficacy scores of Student-Teachers.

Variables	Self-Efficacy scores of college Student-Teachers			
	r- value	Degrees of freedom	p-value	Signi.
TPC	0.5204	978	0.0001	S

The results of the analysis indicates that a significant and positive correlation between the Techno-Pedagogy skills and Self-Efficacy scores of college Student-Teachers (r-value =0.5204, p-value=0.0001) at a 5% level of significance. This finding suggests that as Techno-Pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in Self-Efficacy scores among college Student-Teachers. In other words, the Techno-Pedagogy Skills and Self-Efficacy scores of college Student-Teachers are interconnected and influence each other.

Hypothesis 2: There is no significant relationship between techno-pedagogy skills with self - Efficacy scores of male student teachers

Table 2: Results of correlation coefficient between techno-pedagogy skills and its dimensions with Self-Efficacy scores of male student-teachers

Variables	Self-Efficacy scores of male student-teachers			
	r-value	Degrees of freedom	p-value	Signi.
Techno-pedagogy skills	0.5587	273	0.0001	S

The results of the analysis indicate that a significant and positive correlation between the techno-pedagogy skills and Self-Efficacy scores of male student-teachers (r- value=0.5587, p-value=0.0001) at a 5% level of significance. Therefore, we reject the null hypothesis and accept the alternative hypothesis. This finding suggests that as techno-pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in Self-Efficacy scores among male student-teachers. In other words, the techno-pedagogy skills and Self-Efficacy scores of male student-teachers are interconnected and influence each other.

Hypothesis 3: There is no significant relationship between techno-pedagogy skills with Self-Efficacy scores of female student teachers.

Table 3: Results of correlation coefficient between techno-pedagogy skills and dimensions with Self-Efficacy scores of female student-teachers.

Variables	Self-Efficacy scores of female student-teachers			
	r-value	Degrees of freedom	p-value	Signi.
Techno-pedagogy skills	0.5011	703	0.0001	S

The results of the analysis indicates that a significant and positive correlation between the techno-pedagogy skills and Self-Efficacy scores of female student-teachers (r-value=0.5011, p-value=0.0001) at a 5% level of significance. Therefore, we reject the null hypothesis and accept the alternative hypothesis. This finding suggests that as techno-pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in Self-Efficacy scores among female student-teachers. In other words, the techno-pedagogy skills and Self-Efficacy scores of female student-teachers are interconnected and influence each other.

Findings of the Study

The present study has yielded significant insights into the educational requirements of male and female student teachers, specifically about the relationship between Techno Pedagogy abilities and Self-Efficacy.

1. Techno-Pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in Self-Efficacy scores among college Student-Teachers.
2. Techno-Pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in Self-Efficacy scores among male student-teachers.
3. Techno-Pedagogy skills scores increase or decrease, there is a corresponding increase or decrease in Self-Efficacy scores among female student-teachers.

Educational Implications

The study of Self-Efficacy and Techno-Pedagogy skills of Student-Teachers has several educational implications considering the outcomes of such a study, the following are some significant implications:

1. The concept of Self-Efficacy describes a person's confidence in their capacity to learn through exercises and instructional methods that target certain subjects or domains. Developing Self-Efficacy can improve their general teaching abilities and give them more confidence when using technology for pedagogical goals.
2. The study emphasizes the significance of promoting student teachers' self-fostering Self-Efficacy. Learning institutions ought to give student teachers the opportunity to participate in practical experiences, get helpful criticism, and celebrate their accomplishments.

Conclusion:

Teachers must be able to rapidly and effectively adjust to the ever-changing problems in order to meet the requirements and demands of the modern society. Utilizing a variety of technological tools in the classroom helps teachers comprehend the scope of information and is also linked to reduced teacher Self-Efficacy. Hence, these research findings are the techno-pedagogy skills scores increase or Cortana decrease, there is a corresponding increase or decrease in Self-Efficacy scores among male and female Student-Teachers. In other words, the techno pedagogy skills and self -efficacy scores of male or female student teachers are interconnected and influence each other. Over all the techno pedagogy skills and self -efficacy scores of college student teachers are interconnected and influence each other.

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A STUDY ON AWARENESS ABOUT DIGITAL LITERACY AMONG SECONDARY SCHOOL STUDENTS

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Abstract

The advent of the digital age has brought significant changes to education, requiring students to develop digital literacy skills. This study has examined the level of awareness of digital literacy among secondary school students, with a focus on gender and locality differences. The research was conducted on a sample of 200 students using stratified sampling techniques, encompassing both urban and rural schools. A structured questionnaire was used as the research tool to gather data on digital literacy awareness. Statistical analysis revealed a significant difference in digital literacy awareness based on gender and locality. The study highlights the urgent need for digital literacy initiatives in secondary education, especially for students from rural areas.

Key words: Digital literacy, digital tools

Introduction

Digital literacy refers to the ability to effectively use digital tools, understand and critically evaluate information, and communicate and participate online. In an era where technology has permeated almost every aspect of life, particularly in education, it is vital for students to be digitally literate. The shift towards online learning and the integration of digital tools in educational practices make digital literacy an essential skill for students to succeed academically and beyond.

In this context, the present study explores the awareness of digital literacy among secondary school students. The aim of the study was to assess whether students have the necessary digital literacy skills and determine if there are any differences in awareness based on gender and locality (urban vs. rural). As the digital divide continues to widen, understanding these differences can help educators develop more inclusive digital literacy programs.

Need and Importance of the Study

In today's interconnected world, digital literacy has become a fundamental skill for students to thrive academically, socially, and professionally. With the increasing integration of digital tools in education, secondary school students must possess the ability to navigate, evaluate, and utilize digital technologies effectively. Digital literacy extends beyond basic technical skills; it includes critical thinking, responsible use of digital resources, and an understanding of online safety and privacy.

The growing reliance on digital platforms for learning, communication, and research highlights the need to assess students' awareness of digital literacy. Secondary school students are at a pivotal stage of their education, where developing digital skills is crucial for their future success. Identifying gaps in their awareness will help educators and policymakers design targeted interventions that foster digital literacy, ensuring that students can effectively engage with the digital world.

This study is essential for understanding the current state of digital literacy and guiding efforts to enhance students' preparedness for the demands of a digital society.

Objectives of the Study

- To assess the level of digital literacy awareness among secondary school students.
- To find out the significant mean difference among the secondary school students about digital literacy awareness with respect to gender.

- To find out the significant mean difference among the secondary school students about digital literacy awareness with respect to locality.

Hypothesis of the study

1. There is no significant difference in digital literacy awareness between male and female secondary school students.

2. There is no significant difference in digital literacy awareness between secondary school students from urban and rural areas.

Variables of the study

1. Independent Variables:

- Gender (Male and Female)
- Locality (Urban and Rural)

2. Dependent Variable:

- Digital Literacy Awareness

Method of the study

The survey method was used for the present study.

Sampling

The population for the study consists of all secondary school students of Shimoga district. The sample size of 200 students was selected using a stratified sampling technique. Stratified sampling ensures that students from both urban and rural schools, as well as both genders, are proportionately represented in the study. The sample was divided equally between male and female students (100 each) and between urban and rural schools (100 each).

Instrumentation

A self-constructed questionnaire was employed to collect data on students' digital literacy awareness. The questionnaire comprised 25 items covering aspects of digital literacy such as:

- Technical skills (using digital devices)
- Information evaluation (judging the credibility of online content)
- Online communication and participation
- Awareness of digital safety and security

The investigator had selected the questionnaire form. The tool had 20 items. Each item was in the form of multiple choice. The correct response of every item carried one point score. The tool was prepared and developed by the investigator and it was used to collect the data in this study. The reliability and validity of the tool were established.

Statistical Analysis and Interpretation of Data

1. **To assess the level of digital literacy among higher secondary school students.**

   Table 1: Level of Digital literacy among secondary school students. (N=200)

Sl.no	Level of Digital Literacy	No of Students	Percentage	Status
1	High	46	23%	
2	Moderate	123	61.5%	Moderate
3	Low	31	15.5%	

The level of digital literacy was tested through the questionnaire. It was found that out of the total sample 61.5% of the secondary school students had moderate digital literacy and 15.5% had low digital

literacy. But interestingly 23% of the students had high digital literacy. This brings into the picture that the digital literacy is more of moderate level.

Hypothesis 2: There is no significant difference in the awareness digital literacy among secondary school students with respect to gender.

Significance of difference between means of Awareness of MOOCs - SWAYAM among

Student - Teachers with respect to Gender

Significance of difference between means of Awareness of digital literacy among secondary school students with respect to Gender

Gender	N	Mean	S.D	t	Level of significance at 0.01 level
Female	100	17.16	1.53	0.46	Not significant
Male	100	17.18	1.45		

Above table shows that the obtained t-value is 0.46 and it is found that it is not significant at 0.01 level of significance. Hence the null hypothesis is accepted that "There is no significant difference in the digital literacy awareness among secondary school students with respect to gender".
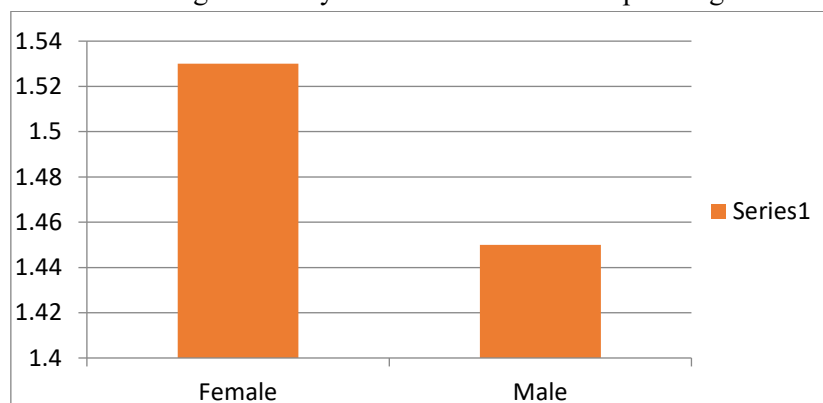
Hypothesis 2: There is no significant difference in the awareness digital literacy among secondary school students with respect to locality.

Significance of difference between means of Awareness of MOOCs - SWAYAM among

Student - Teachers with respect to Gender

Significance of difference between means of Awareness of digital literacy among secondary school students with respect to Locality

Gender	N	Mean	S.D	t	Level of significance at 0.01 level
Rural	100	17.1	1.43	0.22	Not significant
Urban	100	17.24	1.54		

Above table shows that the obtained t-value is 0.22 and it is found that it is not significant at 0.01 level of significance. Hence the null hypothesis is accepted that "There is no significant difference in the digital literacy awareness among secondary school students with respect to locality".
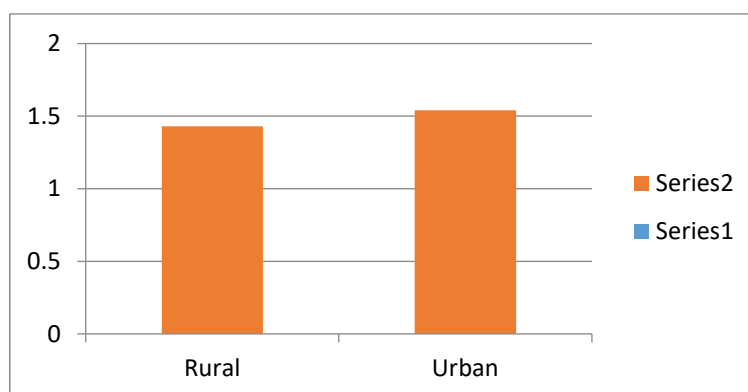
Interpretation

The results presented in the tables indicate that the t-values for both gender and locality differences in digital literacy awareness among secondary school students are not statistically significant at the 0.01 level.

The mean digital literacy awareness scores for female students (M = 17.16, SD = 1.53) and male students (M = 17.18, SD = 1.45) are almost identical. The obtained t-value of 0.46 is much lower than the critical value at the 0.01 significance level, indicating no significant difference between male and female students in terms of digital literacy awareness. Thus, the null hypothesis is accepted, confirming that gender does not have a significant impact on students' digital literacy awareness.

Similarly, the mean digital literacy awareness scores for rural students (M = 17.1, SD = 1.43) and urban students (M = 17.24, SD = 1.54) show a slight difference. However, the obtained t-value of 0.22 is not significant at the 0.01 level, suggesting that there is no meaningful difference in digital literacy awareness between students from rural and urban areas. Therefore, the null hypothesis is accepted, indicating that locality does not significantly influence students' digital literacy awareness.

Educational Implication.

- Digital literacy can be integrated into mainstream curricula, benefiting all students equally.
- Schools should embed digital literacy topics within subjects like science, language, and social studies to enhance students' proficiency.
- Teachers should receive continuous professional development in digital literacy to ensure they are equipped to guide students effectively, as the lack of significant differences shows that all students, regardless of gender or locality, can benefit from well-trained educators.

Suggestions for Further Study

Further research could expand the sample size and include additional demographic factors such as socio-economic status, access to technology at home, and parental involvement in digital education.

A qualitative component could be added to explore students' personal experiences with digital tools and how they apply digital literacy skills in different contexts.

Conclusion

This study provides a comprehensive overview of digital literacy awareness among secondary school students. The findings indicate a moderate level of awareness overall, no significant differences based on gender and locality. In conclusion, the analysis shows that neither gender nor locality significantly affects the digital literacy awareness of secondary school students. This suggests that the awareness of digital literacy is fairly uniform across both groups, and any differences observed are not statistically significant.

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A STUDY ON INFORMATION NEEDS AND INFORMATION SEEKING BEHAVIOUR AMONG RESEARCHSCHOLARS IN VIJAYANAGARA SRI KRISHNADEVARAYA UNIVERSITY BALLARI

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Abstract

This paper examines that the information needs and information seeking behaviour of research scholars in Vijayanagara Sri Krishnadevaraya University, Ballari: A Survey. A survey method was used for collecting of the data. 150 copies of questionnaires were distributed. Among them 130 were returned. Majority of the respondents (32.3%) useInternet for reading purpose. Majority of the respondents (98.5%) prefer to use internet services for E-Mail, Majority of the respondents (91.5%) frequently used google search engine, Most of the respondents (90.8%) have awareness on electronic information sources. Majority of the respondents (32.3%) are learned electronic resources by self by trial and error method. Majority of the respondents (26.9%) have information on journals articles as a type of required information needs. Majority of the respondents (36.2%) replied that they are purpose of seeking information for writing papers. Majority of the respondents (35.4%) have periodicalsas a type of seeking materials in the library. Majority of the respondents (61.5%) can't say of the inadequacy of requirement information in their library. Majority of the respondents (26.9%) replied that some of information materials are old in using the library problem faced by them.

Keywords: Information Need, Information Seeking Behaviour, Research Scholars, Vijayanagara Sri Krishnadevaraya University, Ballari.

1.   Introduction

The user community of university library consists of mainly post-graduate students, research scholars, and faculty members. Among them, research scholars' use of the library is crucial totheir research work, and the university library is intended to be a place where students consultto acquire more knowledge. Generally the student and research scholar community is largest in size than other user communities in university setup.

Libraries and information centers play a major role in information transfer cycle. The role of the University Libraries is not only limited to the preservation of reading materials but also toensure that the information needs of the users are met by its own traditional as well as electronic resources and services.

Information

According to Oxford English dictionary, "Information is facts or knowledge provided or learned" [1]. Shah pointed that "Information is power and it is a life saver for any venture" [2]. Reitz defined "Information as all the facts, conclusions, ideas, and creative works of the human intellect and imagination that have been communicated, formally or informally, in anyform" [3].

Information is an important and key resource and an essential in put for all types of organizations. Libraries have limited resources with which they have to satisfy the information needs of the users. Therefore, libraries have to build their collections and facilities to meet the requirements of the users. The present era is an era of information. Good learning is based upon adequate information. Libraries provide information through their resources and services. Hence, academic libraries are playing vital role in shaping a future generation of students and research scholarsby providing required information to them.

Information needs of research scholars

Information is crucial for nation's development. The development of any nation is not possible until and unless the information is made available at the door steps of those who need, preferably free of cost. People like policy makers, planners, economists, farmers, teachers and research scholars, doctors, engineers, librarians' etc. require information for their occupational and day to day activities. No matter whether they are in office, or at home, in college, in the rural areas, they all need information either directly or indirectly. Students as the largest chunk of library users need information in their daily life. Post-graduate students in universities need information and course materials for their all-round developmentwhich is obtained from the resources of the library.

Information seeking behaviour of research scholars

Information seeking behaviour is an area of active interest among the information scientists, academicians, scientists, sociologists, researchers and psychologists. Information seeking habits result from the recognition of some need, perceived by the user, whom as a consequence makes demand upon formal systems such as libraries, information centres, online services or persons to meet their information needs. Information systems exist to enhance the flow and utilization of information and augment the information processing function of man in reaching rational decisions in day-to-day life. The research scholars may seek the required information by referring books, browsing periodicals, consulting abstractingand indexing periodicals, consulting colleagues and friends. They also seek information fromteachers, senior research scholars, post doctoral fellows and information centres. They also seek information through seminars, conferences, workshops, symposiums, etc. The majority of the information is sought by the research scholars from the sources and services of the library in which they are the users.

2. Review of Literature

Nirupma Chohda. and Neeru Gupta. (2017) made a study on the Use Pattern and Seeking Behaviour of Students in National Institute of Technology, Jalandhar, **India.** Determining use patterns and information seeking behaviour of users is consequential to enhance library collections, facilities, and services. This paper tends to investigate information seeking behaviour and use pattern of students on quality of procured information in National Institute of Technology, Jalandhar, India. Survey research method is adopted for the study. Analysisof data is done through percentage count. It is found that 70 per cent are aware about the e- journals and databases. The result indicated that both print and electronic e-journals are highly preferred by students but access them in other places then departmental library and

32.22 per cent respondents spent time more than hours for internet access. The study will be useful for the academic librarians in improving the shortcomings of their institutes and will procure the required e-journals for their Institutes.

Ajay Kaushik. (2016) carried out a study on Information Seeking Behavior of Faculty of YMCA University. Information has become the most important aspect of today's social development, as social development depends on the standard of living of that particular society. The vital factor that affects research is information. The amount and type of information received would directly have its impact on the social development. The present study attempts to understand Information Needs and Information Seeking Behavior of facultyYMCA Faridabad (India). The study shows that teachers are least concerned with Government documents, dissertation/thesis and proceeding of conferences as source of information. Maximum Teachers (97.4%) are aware about the back volume of the journals. It is also found in the study that maximum teachers were satisfied with the Library collections.

Maximum users used circulation service, reference service, computerized service and photo coping service. The present era is called the "Information era." Information has become the most important element for progress in society. To thrive in this modern era, one needs a variety of information, no matter how well versed one is in a field or profession. Psacharopoulous (1982) discusses the necessity of information in the present age. We can reorganize the educational system and redefine scientific research only with the help of information.

3. Objectives of the Study

The following are specific objectives of the study:

1. To know the frequency of library visit of research scholars;
2. To know the purpose of library visit of research scholars;
3. To identify the information needs of the research scholars;
4. To know the information seeking approach and types of information seeking fromtheir library;
5. To know the problems faced by the research scholars in using the library sources and services.

4. Scope of the Study

The study is undertaken to explore the information needs and information seeking behaviour of research scholars and their perception on information needs and seeking behaviour in the surveyed Vijayanagara Sri KrishnadevarayaUniversity, Ballari*:* to find the ways and means to promote the existing system.

5. Methodology

The survey method was used in this study. Question tool was used to collect data from the research scholars. 150 questionnaires were distributed to the research scholars following accidental sampling method. The researcher received 130 questionnaires out of 150. After collecting data required for the study, the data was analysed and interpreted in the form of tables.

6. Analysis of the Data

Library visit

A question has been asked to the respondents to know their frequency of library visit. The replies given by them are shown in Table 1.

Table 1: F**requency of library visit**

Frequency	Arts		Science		Total N=130 (%)
	n=85	%	n=85	%	
Daily	26	30.6	18	40	44 (33.8%)
Alternative days	21	24.7	14	31.1	35 (26.9%)
Once in a week	18	21.2	7	15.6	25 (19.2%)
Once in a month	14	16.5	4	8.9	18 (13.8%)
Occasionally	6	7	2	4.4	8 (6.2%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

It is obvious from the Table 1 that majority of the respondents (33.8%) visit library daily followed by Alternative days (26.9%), Once in a Week (19.2%), Once in a Month (13.8%) and remaining of them (6.2%) are visited library Occasionally.

Time spent

A question has been asked to the respondents to know the amount of time they spent in the library per day. The replies given by them are shown in Table 2. The Table 2 depicts that majority of the respondents (31.5%) are spend one to two hours in the library followedby two to three hours (28.5%), less than one hour (20.8%), three to four hours (13.8%) and remaining of them (5.4%) are spend above four hours in the library.

Table 2: Time spent in the library per day

Time Spent	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
0- 1	17	20	10	22.2	27 (20.8%)
1 - 2	24	28.2	17	37.8	41 (31.5%)
2 - 3	26	30.6	11	24.4	37 (28.5%)
3 - 4	13	15.3	5	11.1	18 (13.8%)
Above 4	5	5.9	2	4.5	7 (5.4%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

Purpose of using Internet

A question has been put to the respondents to know the purpose for which they use Internet. The replies given by them are shown in Table 3.

Table 3 : Purpose for which they use Internet

Purpose	Discipline				Total N=130 (%)
	Arts		Science		
	n=85	%	n=45	%	
Reading	27	31.8	15	33.3	42 (32.3%)
Literature search	25	29.4	5	11.1	30 (23.1%)
Database search	5	5.9	12	26.7	17 (13.1%)
E-Mail	9	10.6	3	6.7	12 (9.2%)
Chatting	6	7	1	2.2	7 (5.4%)
Information Seeking	13	15.3	9	20	22 (16.9%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 3 reveals that the majority of the respondents (32.3%) use Internet for reading purpose followed by Literature Search (23.1%), Information Seeking (16.9%), Database Search (13.1%), E-Mail (9.2%) and remaining of them (5.4%) are use Internet for Chatting purpose.

Prefer to use of internet services

A question has been put to be respondents to know their preference in using of internet services in the library. The replies given them are shown in Table- 4.

Table 4: Prefer to use of internet services

Prefer to use	Discipline				Total N=130 (%)
	Arts		Science		
	n=85	%	n=45	%	
E-Mail	83	97.6	45	100	128 (98.5%)
Web Search	68	80.0	30	66.6	98 (75.4%)
Online Databases	33	38.8	24	53.3	57 (43.8%)
E-Journals/E-Books	74	87.1	41	91.1	115 (88.5%)

(Respondents are permitted to tick more than one answer.)

The Table 6.1.4 shows that the majority of the respondents (98.5%) prefer to use internet services for E-Mail followed by them E-journals/E-books (88.5%), Web search (75.4%) and remain of them (43.8%) prefer to use internet services for Online Databases.

Search engines

A question has been put to the respondents to know their frequently used search engines in the library. The replies given by them are shown in Table- 5.

Table 5: Frequently used the search engines

Search engines	Discipline				Total N=130 (%)
	Arts		Science		
	n=85	%	n=45	%	
Google	77	90.6	42	93.3	119 (91.5%)
Yahoo	55	64.7	33	73.3	88 (67.7%)
MSN	29	34.1	19	42.2	48 (36.9%)
Altavista	17	20.0	11	24.4	28 (21.5%)
Rediff	33	38.8	24	53.3	57 (43.8%)
Bing	17	20.0	15	33.3	32 (24.6%)

(Respondents are permitted to tick more than one answer.)

The Table 5 clears that the majority of the respondents (91.5%) frequently used google search engine followed by them yahoo search engine (67.%), Rediff search engine (43.8%), MSN search engine (36.9%), Bing search engine (24.6%) and remaining of them (21.5%) frequently used Altavista search engine.

Awareness on electronic information sources

A question has been posed to the respondents to know their awareness on electronic information sources available in their library. The replies given by them are shown in Table 6.

Table 6: Awareness on electronic information sources

Reply	Discipline				Total N=130 (%)
	Arts		Science		
	n=85	%	n=45	%	
Yes	76	89.4	42	93.3	118 (90.8%)
No	9	10.6	3	6.7	12 (9.2%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 6 elucidates that majority of the respondents (90.8%) have awareness on electronic information sources and remain of them (9.2%) do not have awareness on electronic information sources.

Sources to know about learning method of electronic resources

A question has been asked to the respondents to know their method in using electronic resources in

their library. The replies given by them are shown in Table 7

Table 7: Learning method of electronic resources

Learn Method	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
Self by Trial and Error method	26	30.6	16	35.6	42 (32.3%)
Online Instruction	8	9.4	6	13.3	14 (10.8%)
Through Friends /Colleagues	11	12.9	8	17.8	19 (14.6%)
Training provided by thelibrary staff/ workshop/ short course	27	31.8	12	26.7	39 (30%)
Someone at Terminal	6	7.1	1	2.2	7 (5.4%)
By Reading books, journal articles etc	7	8.2	2	4.4	9 (6.9%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 7 portrays that majority of the respondents (32.3%) are learned electronic resources by self by trial and error method followed by training provided the library staff/workshop/short course (30%), through friends/colleagues (14.6%), online instruction (10.8%), by reading books, journals articles etc. (6.9%), and remain of them (5.4%) are learned electronic resources through someone at terminal.

Types of Information Need

A question has been put to the respondents to know their which type of information do you need. The replies given by them are shown in Table 8.

Table 8: Type of information need

Type of Information Need	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
Information on Employment	16	18.8	2	4.4	18 (13.8%)
Information on Course study	11	12.9	4	8.9	15 (11.5%)
Information on Competitive Exams	15	17.7	5	11.1	20 (15.4%)
Information on updating knowledge	5	5.9	9	20	14 (10.8%)
Information on entertainment	3	3.5	0	0.0	3 (2.3%)
Information on Conference Proceedings	14	16.5	11	24.5	25 (19.2%)
Information of Journals Articles	21	24.7	14	31.1	35 (26.9%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 8 enumerates that majority of the respondents (26.9%) have information on journals articles as a type of required information needs followed by information on conference proceedings (19.2%), information on competitive exams (15.4%), information on employment (13.8%), information on course study (11.5%), information on updating knowledge (10.8%), and remain of them (2.3%) have information on entertainment as a type of required information need.

Purpose of seeking information

A question has been put to the respondents to know their purpose of seeking information in the library. The replies given by them are shown in Table 9.

Table 9: Purpose of seeking information in the library

Purpose of Seeking Information	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
For preparing examination	5	5.9	1	2.2	6 (4.6%)
For updating knowledge	21	24.7	12	26.7	33 (25.4%)
For writing assignment	8	9.4	2	4.4	10 (7.7%)
For writing papers	27	31.8	20	44.5	47 (36.2%)
Preparing for competitive exams	21	24.7	10	22.2	31 (23.8%)
For entertainment	3	3.5	0	0.0	3 (2.3%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 9 shows that majority of the respondents (36.2%) replied that they are purpose of seeking information for writing papers followed by for updating knowledge (25.4%), for preparing for competitive exams (23.8%), for writing assignments (7.7%), for preparing examinations (4.6%) and remain of them (2.3%) replied that they are purpose of seeking information for entertainment.

Type of seeking materials

A question has been put to the respondents to know their which type of materials seeking in the library. The replies given by them are shown in Table 10.

Table 10: Type of materials seeking in the library

Type of Seeking Information	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
Textbooks	17	20	5	11.1	22 (16.9%)
Periodicals	29	34.1	17	37.8	46 (35.4%)
Newspapers	12	14.1	4	8.9	16 (12.3%)
Reference books	15	17.6	11	24.4	26 (20%)
General books	2	2.4	1	2.2	3 (2.3%)
Competitive exam books	10	11.8	7	15.6	17 (13.1%)
Total	**85**	**100**	**45**	**100**	**130(100)**

The Table 10 explains that majority of the respondents (35.4%) have periodicals as a typeof seeking materials in the library followed by reference books (20%), textbooks (16.9%), competitive books (13.1%), newspapers (12.3%) and remain of them (2.3%) have general books as a type of seeking materials in their library.

Required information

A question has been put to the respondents to know their required information is not availablein the library. The replies given by them are shown in Table 11.

Table 11: Inadequacy of requirement information in the library

Reply	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
Dissatisfied	12	14.1	7	15.5	19 (14.6%)
Helpless	9	10.6	14	31.1	23 (17.7%)
Frustrated	5	5.9	3	6.7	8 (6.2%)
Can't say	59	69.4	21	46.7	80 (61.5%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 11 enumerates hat majority of the respondents (61.5%) can't say of the inadequacy of requirement information in their library followed by (17.7%) helpless, (14.6%) dissatisfied and remain of them (6.2%) frustrated of the inadequacy of requirement information in the library.

Problems while seeking information

A question has been put to the respondents to know whether they have problems while seeking information. The replies given by them are shown in Table 12.

Table 12: Problems faced while using library resources and services

Problem	Arts		Science		Total N=130 (%)
	n=85	%	n=45	%	
Materials not available	14	16.5	7	15.6	18 (13.8%)
Library staff is unwilling service	6	7.1	0	0.0	15 (11.5%)
Incomplete information service	18	21.2	9	20	20 (15.4%)
Lack of time	7	8.2	2	4.4	14 (10.8%)
Lack of knowledge in using the library	15	17.6	4	8.9	3 (2.3%)
Information scattered in too many sources	12	14.1	10	22.2	25 (19.2%)
Some of information materials are old	13	15.3	13	28.9	35 (26.9%)
Total	**85**	**100**	**45**	**100**	**130 (100%)**

The Table 12 presents that majority of the respondents (26.9%) replied that some of information materials are old in using the library problem faced by them followed by information scattered in too many sources (19.2%), incomplete information service (15.4%), materials are not available (13.8%), library staff unwilling service (11.5%), lack of time (10.8%) and remain of them (2.3%) replied that lack of knowledge in using the library problem faced by them

7. Findings of the Study

The major findings of the study are:

1. Only one third of the respondents (33.8%) visit library daily.
2. Majority of the respondents (31.5%) are spend one to two hours in the library.
3. Majority of the respondents (32.3%) use Internet for reading purpose.
4. Majority of the respondents (98.5%) prefer to use internet services for E-Mail.
5. Majority of the respondents (91.5%) frequently used google search engine.
6. Most of the respondents (90.8%) have awareness on electronic information sources.
7. Majority of the respondents (32.3%) are learned electronic resources by self by trial and error method.

8. Majority of the respondents (26.9%) have information on journals articles as a type of required information needs.

9. Majority of the respondents (36.2%) replied that they are purpose of seekinginformation for writing papers.

10. Majority of the respondents (35.4%) have periodicals as a type of seeking materials in the library.

11. Majority of the respondents (61.5%) can't say of the inadequacy of requirement information in their library.

12. Majority of the respondents (26.9%) replied that some of information materials are old in using the library problem faced by them.

8. Suggestions

1. The research scholars should visit library regularly to get required information. Visiting library should become as a habit. It will lead to become a knowledge person by visiting library daily.

2. Majority of the respondents not spending their majority of their time in the library. Hence, research scholars should spend at least three to four hours in the library consultation with reference and other reading materials.

3. More than one fourth of the research scholars relied that reading materials are old. Hence, latest editions of the reference books and other materials are the procured.

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ROLE OF GAMIFICATION IN TEACHING, LEARNING AMONG HIGHER SECONDARY SCHOOL STUDENTS

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Abstract

Recently, gamification has been hailed as a powerful tool for user engagement that can improve online learning. There is still no taxonomy of the tangible effects of gamification, despite the fact that there has been an increase in research on the topic in recent decades. According to Deterding et al. (2011), gamification is the application of game characteristics outside of games. The use of gamification in information systems (IS) has been expanding across a number of sectors, including education, health, business, and job ideation (Hamari et al. 2014b). Given that games are enjoyable and inherently motivating, the notion that gamification is beneficial stems from the association with the game experience. According to Hamari and Koivisto (2013), a gamified system aims to increase user engagement and enhance a target outcome, such as user participation, learning, purchases, social interaction, and, eventually, productivity. By examining the impact of gamification on teachers' and students' learning engagement, this article seeks to close this gap. Systems that use gamification could increase student engagement and improve their academic achievement. Similar to how games can increase student engagement, gamification in education can help students develop certain skills and maximise their learning. Gamification is promoted as a cutting-edge approach to conventional teaching in upper secondary school. In this regard, the purpose of this article is to analyse the use of gamification in higher secondary school education by determining the impact of gamified teaching on students.

Keywords: Gamification, learning, teaching, High school.

Introduction

In higher secondary education nowadays, there is a continuing need to raise the standard of instruction. In order to improve the teaching-learning process, teachers are implementing changes to traditional methods, placing a strong emphasis on the use of more active and participatory procedures where students develop a more dynamic perspective. This implies that it is the duty of educators to implement cutting-edge, realistic tactics that boost students' motivation and foster meaningful learning. In order to facilitate this process, educators are turning more and more to the usage of cutting-edge digital platforms and/or tools. In the classroom of higher secondary school, these technologies enable teachers to provide a variety of tactics and stimulating exercises. Gamification is a strategy for educational reform that is becoming more and more significant in upper secondary education. The use of gaming strategies in the classroom to inspire and include students in the learning process is known as "gamified teaching." Students in a higher secondary setting can find academic material more fascinating, engaging, and meaningful when game aspects are incorporated into teaching and learning. The effects of gamification as a teaching method for college students have been examined recently.

These studies have demonstrated a positive effect on academic achievement as well as students' motivation for the subject. Therefore, this tool has a lot of potential in the context of secondary education. However, additional research is required to show how successful gamification is when used in higher education.

Thus, this article's goal is to collect data on gamification practices used in higher secondary education and examine how they affect the learning of these pupils.

Teaching Methods, Strategies

Teaching Methods: Teaching methods are specific techniques educators employ to deliver knowledge or skills, such as lectures, discussions, or hands-on activities.

Teaching Strategies: The overarching plans or approaches guiding how content is taught.

Here's why teaching methodologies matter:

Enhancing Engagement: Active approaches to teaching capture students' attention and foster a deeper connection with the subject matter. When students are actively engaged, they are more likely to internalize and reflect upon the content.

Catering to Diverse Learning Needs: Every student has a unique learning style and pace. By employing a variety of methods of teaching, educators can ensure that they address all students' diverse needs and preferences, making learning more inclusive.

Improved Retention: The right approaches to teaching don't just impart knowledge; they make it stick. Educators can enhance understanding and retention of content by catering to different learning styles and actively involving students.

Teaching learning Approaches

1. Game-based Learning (Gamification Approach)

2. Student-Centered Approaches

3. Teacher-centered Learning

4. Project-Based Learning

5. Social Emotional Learning

6. Flipped Classroom Model

7. Collaborative Learning Strategies

8. Inquiry-Based Learning

9. Problem-based Learning

10. Personalized Learning

Theoretical Background of Gamification

Nick Pelling was the one who pioneered gamification in education and created the word back in 2002. However, gamification had been around for a while. The S&H Green Stamps, which were introduced in 1896, were among the earliest examples of gamification. In 1908, the boy scouting movement came next.

Gamification Concept

Games are incorporated into the curriculum in this creative teaching approach. Rather than traditional teaching techniques, it uses game-like elements to increase student engagement and learning. It entails incorporating aesthetics, game dynamics, and critical thinking into already-existing educational activities. It is the process of turning standard academic elements into themes for video games. By using every aspect of your classroom as a metaphor for a game, gamification aims to really turn learning into a game, turning your entire class into a single, first-person game. Gamification, to put it simply, is the use and incorporation of game-like aspects into an activity. Since gamification effectively raises student interest and engagement, it is currently gaining a lot of traction in the educational field. One excellent example of gamification is Kahoot, which enables teachers to quickly design formative assessments, like multiple-choice quizzes, to gauge students' comprehension. Game-based quizzes are another well-liked and successful form of gamified learning. Students may simply log in using a web browser or smartphone and engage in a live conversation. Instead of using the usual multiple-choice test design to measure your team's grasp of key topics, you may present the questions in a format that appears like

your traditional smart phone games. Additional instances include narratives, graphic design, contests, difficulties, incentives, and feedback. A game-like quiz on product knowledge that is gamified with badges to encourage participation.

According to Liu et al. (2017), gamification is the process of adding aspects of game design to a target system while keeping the system's useful features. The foundation of this concept is the idea that gamification is the addition of a game layer to a nongame system (Santhanam et al. 2016). While a game would forgo some instrumental functionality of a target system in order to maintain its entertainment value, gamification design would add features, be centred on encouraging user participation, and retain all original instrumental functionality of a target system (Liu et al. 2017). "A gamified system may or may not be in a serious context, but it definitely does not require a full-fledged system, as games do," according to Deterding et al. (2011b). Liu et al. (2017) defined gamification as a means of limiting the scope of analysis and eliminating any full-fledged game, which serves as our guidance for this study.

According to Deterding et al. (2011), gamification is the application of game characteristics outside of games. The use of gamification in information systems (IS) has been expanding across a number of sectors, including education, health, business, and job ideation (Hamari et al. 2014b). Given that games are enjoyable and inherently motivating, the notion that gamification is beneficial is derived from the association with the gaming experience. According to Hamari and Koivisto (2013), a gamified system aims to increase user engagement and enhance a target outcome, such as user participation, learning, purchases, social interaction, and, eventually, productivity.

Gamification in Education.

Researchers' attention has been drawn to the usage of gamification aspects in the educational context, which has significantly increased in recent years. Gamification of learning systems has the ability to significantly improve students' learning performance as an informative activity in and of itself (Dichev and Dicheva 2017; Landers and Landers 2014; Ortiz-Rojas et al. 2017). By encouraging participation in learning activities that will improve learning outcomes and decreasing feelings of boredom in certain tasks, the aim is to inspire students in novel ways (Hanus and Fox 2015). Again, the IS literature lacks a clear distinction between the experiential and instrumental outcomes of gamified educational systems, despite the fact that gamification elements like leader boards, badges, and points can be used to engage or motivate students in order to boost participation and learning. Therefore, more study is required to advance this topic, even though the literature still uses several conceptions interchangeably (Dichev and Dicheva 2017).By adding game elements to an educational setting, gamification of education is a tactic for raising student engagement (Dichev and Dicheva 2017). The objective is to create levels of engagement comparable to those that games often generate (Fardo 2014). Enhancing specific skills, introducing learning objectives, engaging students, optimising learning, supporting behaviour change, and fostering socialisation are the primary objectives of gamification (Knutas et al. 2014; Krause et al. 2015; Dichev and Dicheva 2017; Borges et al. 2013). Many researchers have investigated the impact of gamification in an educational setting, motivated by the positive effects that game elements can produce. They have found positive outcomes, including an increase in cooperation, knowledge, user retention, and engagement (Hakulinen and Auvinen 2014; Tvarozek and Brza 2014). Nevertheless, gamification has produced ambiguous or biased outcomes in several research (Christy and Fox 2014). They discovered that ranking has a variety of effects on women and can have unanticipated negative effects. According to Hanus and Fox (2015), gamification not only doesn't improve outcomes but also

lowers motivation and enjoyment. According to Haaranen et al. (2014), some users felt negatively about the badges.

There are questions about the benefits of using gamification in an educational setting due to the conflicting findings regarding its effects in learning environments. Furthermore, studying how gamification components affect students' learning, engagement, and other outcomes is a broad objective. According to Dichev and Dicheva (2017), the goal should be restricted to identifying the aspects of games that work well for a specific student type participating in a given activity. The process of identifying which elements or collections of these elements are effective to promote engagement and learning for a group or type of user performing a specific action is hampered by the different layouts of game elements used to add gamification to diverse activities (Dichev and Dicheva 2017). The traits and preferences that have been studied the most in gamified learning environments include motivation (Pedro 2016; Hakulinen and Auvinen 2014; Mekler et al. 2017), player profile (Barata et al. 2014; O'Donovan et al. 2013), and personality (Codish and Ravid 2014; Jia et al. 2016).

Gamified Teaching in Higher secondary Education

According to the article's goal, it is crucial to understand the idea of gamification and the factors that need to be considered when using it in higher secondary classrooms. There isn't a single, accepted definition for the term "gamification." Gamification, on the other hand, is the use of game aspects in teaching and learning in higher education to encourage students, increase their involvement and engagement in the learning process, and promote the development of training-related skills and competencies. Numerous authors, including Zichermann, Cunningham, and Kapp, have examined the idea of gamification and defined it as a method that involves using various gaming tactics to actively include students in the learning process and solve problems. In this regard, the three writers contend that the incorporation of various game features—such as badges, points, levels, avatars, etc.—into the instructional process affects students' inclination to keep learning. Therefore, the goal of gamified education is to change how individuals learn.

Thus, numerous research studies have investigated the impact of the use of gamification in higher Secondary education. These studies have shown that there is a positive impact, not only on the motivation of individuals in the subject, but also on academic performance, allowing for an improvement of the teaching and learning process in higher Secondary classrooms. However, it was noted that it can be particularly effective for students who have difficulty engaging with learning material. In this way, its application can be useful in fostering collaboration and competition among students, which can be beneficial for their academic and personal development A study by Hamari and Koivisto aimed to examine the impact of gamification within the framework of university-level learning management systems (LMS). The findings demonstrated that this approach can improve the LMS's usability and user satisfaction. It is then emphasised that gamification can enhance student involvement in online forums and other activities, which will help them learn and become more involved in the course.

Werbach and Hunter consider that in order to properly apply gamification in the educational process, it is necessary to take into account six aspects. They are

1. The first is about defining the objectives in a way that is coherent and effective.
2. They highlight the importance of defining the behaviors that they want to encourage in students.
3. Point out the importance of defining the players and their characteristics in order to design the desired activities.

4. The cycles of the activities, the mechanics of the game or the interaction between the participants must be established in order to define the gamification system.
5. The fifth element refers to fun, and finally,
6. In sixth place, establishing the resources, including the tools to be used for the development of the strategy.

Therefore, in order to apply gamification in higher secondary education, it is necessary to design educational situations that involve game elements, such as the definition of objectives, the use of rewards and feedback, the design of challenges, and the creation of a playful and motivating environment. For this, various tools and technologies can be used, such as educational games, online learning platforms, and mobile applications, among others.

Benefits of gamification in education

Gamification combines creativity and student choice, gives students instant feedback so they may readily track their progress towards their learning goals, and enhances peer competitiveness, all of which can increase engagement. Higher engagement, better learning outcomes, ersonalised learning, increased motivation, fostering teamwork, improved adaptation, and a connection to the real world are just a few of the numerous advantages that gamification may bring to the classroom.

Challenges of Gamification in Education

Gamification has drawbacks in spite of its advantages. It takes considerable preparation to create a gamified system that works and supports the learning goals. Overemphasising competition also carries the potential of stressing out kids or alienating them if they aren't performing well. To ensure that students remain engaged on learning rather than just gaining points, teachers must also be trained to strike a balance between enjoyment and instructional value. Access to technology is another issue. Inequalities amongst students with varying access levels may result from the fact that not all schools have the resources needed for digital gamified learning. Teachers need to think about how to apply gamification in a fair and inclusive way. The overemphasis on competition, reliance on technology, shallow learning focus, and teacher training are some other drawbacks of gamification.

Conclusions

This article suggests and illustrates the impact of gamified instruction on the learning of upper secondary students. According to the studies, Higher Secondary students' academic performance, motivation, and involvement in the learning process all improve when gamification strategies are used. Nonetheless, the scientific literature has demonstrated that it is currently a novel topic that has not yet received much attention in certain fields of study. Accordingly, more study into various teaching methods that inspire pupils to learn is required to raise the standard of instruction in higher secondary schools. In this way, this article has enabled us to verify the contribution of the gamification approach to enhancing the learning of students in higher secondary school. Higher secondary school teachers who plan to begin using this cutting-edge teaching method into their lesson plans in order to enhance students' academic performance will surely find this article interesting.

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ADULT EDUCATION AND LIFELONG LEARNING WITH CONCERN TO NATIONAL EDUCATION POLICY 2020

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Abstract

The present conceptual chapter focused on the discuss the key aspect of NEP 2020 and its relation to Adult Education and Lifelong learning. NEP focused on Adult Education and lifelong learning programs. Basically, in NEP 2020 has designed a program for adult education, where people will be made literate and study the key areas according to their profession. Adult Education aims at extending educational options to those adults, who have lost the opportunity and have crossed the age of formal education, but now feel a need for learning of any type, including literacy, basic education equivalency, skill development (Vocational Education) and Continuing Education. The Nation's Education Policy 2020 aims to cover "Adult Education and Lifelong Learning". According to the government, this program under the national scheme aims to give opportunity to attain foundational literacy, obtain an education, and pursue a livelihood. It believes that volunteerism, community involvement and mobilization are key success factors of adult literacy programs, in conjunction with political will, organizational structure, proper planning, adequate financial support, and high-quality capacity building of educators and volunteers. Now, to facilitate community with the education and betterment of all NEP 2020 has come up with a defined structure for adult Education.

The present chapter focused on the study of the National Education Policy 2020 perspective to Adult Education and Lifelong Learning with prime objectives are (i) To understand the basic features of NEP 2020 on Adult Education and Lifelong Learning. (ii) To analyses Lifelong Learning: An Educational Movement. (iii) To discuss the Objectives of Adult Education and Lifelong Learning related to NEP 2020. (iv) To know the Adult Education Curriculum Framework and NEP 2020. The methodology of the chapter is a different type involving an interpretative, conversation, observation and study secondary sources, like books, articles, journals, thesis, university news, expert opinion, and websites, etc.

Key Words: NEP 2020, Adult Education, Lifelong Learning

Introduction:

National Education Policy (NEP) 2020 envisions an Indian-cantered education system that contributes directly to transforming our nation sustainably into an equitable and vibrant knowledge society, by providing high and good quality education to all. NEP 2020 has recommended and focused on that "strong and innovative government initiatives for adult education in particular, to facilitate community involvement and the smooth and beneficial integration of technology is affected as soon as possible to expedite this important aim of achieving 100% literacy". NEP-2020 has also recommended for taking up five important components of Adult Education i.e. (a) Foundational literacy and numeracy; (b) Critical life skills (including financial literacy, digital literacy, commercial skills, health care and awareness, child care and education, and family welfare); (c) Vocational skills development (with a view towards obtaining local employment); (d) Basic education (including preparatory, middle, and secondary stage equivalency); and (e) Continuing education (including engaging holistic adult education courses in arts, sciences, technology, culture, sports, and recreation, as well as other topics of interest or use to local learners, such as more advanced material on critical life skills). The framework would keep in mind that adults in many cases will require rather different teaching-learning methods and materials than those designed for children.

Meaning of Adult Education:

Adult Education is the best practice of teaching and educating adults. It is imparted at the workplace or otherwise in classrooms, through 'extension' or 'continuing education' courses organized at senior

secondary or college and university levels, more generally by adult education professionals. Adult education is also referred to as 'popular education and training for transformation' or 'education for community mobilization' or 'education for sustainable development'. It has also been referred to as andragogy to distinguish it from pedagogy. Pedagogy literally means the art and science of educating children and often it is used as a synonym for all formal classroom-based teaching. More commonly, pedagogy signifies a teacher-cantered education. Andragogy, in contrast, is defined as 'the art and science of helping adults learn'. Its usage now is more broadened to include learner-cantered education for adult people of all ages.

Adult education differs from children's education in many ways. One very significant difference is that adults already have a fairly large amount of accumulated knowledge and experience with them. This knowledge and experience of adults coupled with their deep-seated attitudes can either add value to their learning experience or hinder it. Another significant difference is that adults often seek practical applications and uses of knowledge, which they wish to learn effectively.

Lifelong Learning: An Educational Movement:

Lifelong learning denotes a continuous process of learning both in formal and informal situations; it embodies an add-on experience from everyday life. It has also evolved as a contingent concept implying that "it's never too soon or too late to learn", an educational philosophy that has become a favourite of professional organizations and rapidly changing and modernizing societies. Lifelong learning implies an attitudinal change, which holds that 'one can and should be open to new ideas, decisions, skills or behaviours'. Lifelong learning is now an educational movement within institutions and organizations (both national and international organizations like the national education policy of India and UNESCO). National governments find it necessary to provide their citizens with learning opportunities at all ages so that it is useful for them in numerous contexts, e. g. at their workplaces, in the market, in exercising their consumer rights against unfair trade practices, support for good governance, raising of quality of public life, at home and in their leisure activities. These learning opportunities need to be provided not only through formal educational institutions like the schools, colleges and universities but also through provision of non-formal institutions of lifelong learning.

Lifelong education, as imparted institutionally by organizations like universities and colleges (including some non-governmental organizations like Nirantar, Bharat Gyan Vigyan Samiti, Sewa, etc.), is based on assumptions and philosophy of self-directed learning. Lifelong learning is also a form of pedagogy which is imparted institutionally through channels like correspondence courses offered by universities, distance learning or e-learning, continuing education, home schooling, etc. It includes graduate and postgraduate adult education programs for those adults who wish to improve their qualifications, bring their skills up to date or retrain themselves for a new line of work, Many in-service training and internal corporate organizations' training programs for their workforce have similar goals. In the West, even after retirement people opt for life-long learning programs to satisfy their inner urge for enlightenment, which often takes diverse forms, crossing traditional academic boundaries. Growth of scientific and technological progress in the more modernized and globalized world of recent decades has necessitated the institutionalization of lifelong education. Despite the expansion of institutions like schools, colleges and universities, formal educational institutions alone cannot cover the ever-increasing number of learners and their learning needs, especially the adult population's desire to equip themselves with the latest technological knowledge needed at their living and workplaces. The knowledge and skills acquired by adult population through the formal education would usually not be sufficient for an ever-growing professional and technological environment.

Objectives of Adult Education and Lifelong Learning related to NEP 2020:

The National Education Policy (NEP) 2020 of India envisions a holistic approach to education that encompasses lifelong learning and adult education as integral components. This policy recognizes the importance of continuous learning throughout one's life to adapt to the evolving needs of the society and economy. The objectives of adult education and lifelong learning under NEP 2020 are multifaceted and align with the broader goals of the policy to promote equitable, inclusive, and quality education for all. Here, we delve into the key objectives of adult education and lifelong learning within the context of NEP 2020:
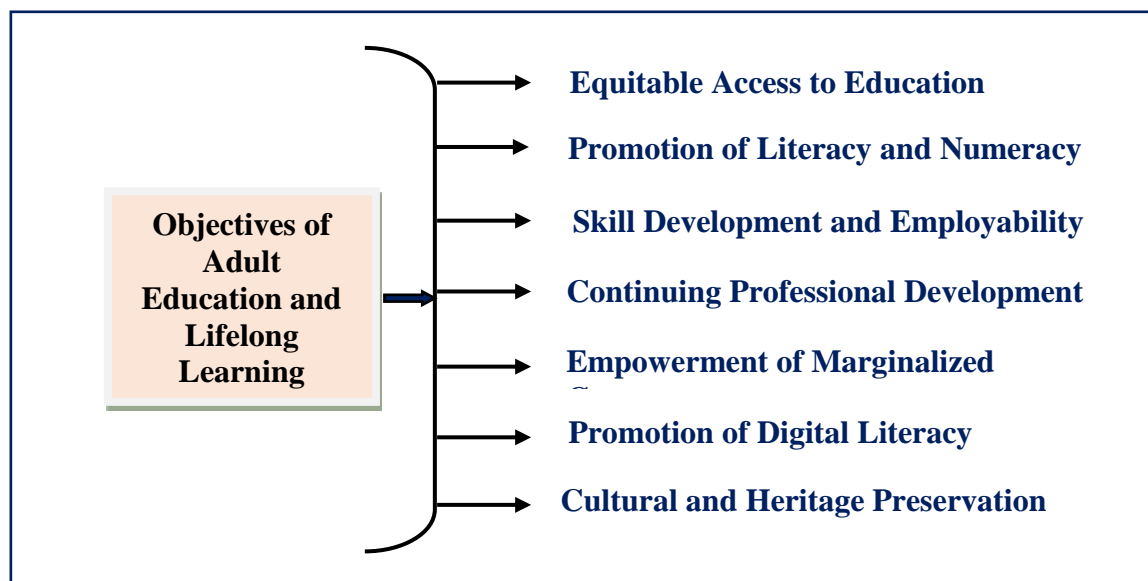
1. Equitable Access to Education:

One of the fundamental objectives of adult education and lifelong learning under NEP 2020 is to ensure equitable access to educational opportunities for all segments of the population, including adults who have missed out on formal education. The policy emphasizes the need to reach out to marginalized and underprivileged communities, including women, rural populations, and socioeconomically disadvantaged groups, to provide them with opportunities for skill development, literacy, and continuing education.

2. Promotion of Literacy and Numeracy:

NEP 2020 places a strong emphasis on foundational literacy and numeracy skills as the building blocks of lifelong learning. Adult education programs are designed not only to impart basic reading, writing, and arithmetic skills to illiterate adults but also to foster a culture of lifelong learning by instilling a passion for learning and critical thinking among learners.

3. Skill Development and Employability:

Lifelong learning initiatives under NEP 2020 aim to equip individuals, including adults, with the necessary skills and competencies to enhance their employability and adaptability in a rapidly changing labour market. Adult education programs are tailored to provide vocational training, technical skills, and entrepreneurship education to enable adults to gain meaningful employment or start their own ventures.

4. Continuing Professional Development:

NEP 2020 recognizes the importance of continuing professional development for adults already in the workforce to upgrade their skills, stay relevant in their careers, and pursue lifelong learning opportunities. Adult education programs incorporate provisions for ongoing training, upskilling, and reskilling to enable professionals to meet the demands of their respective industries and advance in their careers.

5. Empowerment of Marginalized Groups:

Lifelong learning initiatives under NEP 2020 are designed to empower marginalized groups, including women, Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Classes (OBCs), persons with disabilities (PwDs), and minorities, by providing them with access to education, skill development, and socio-economic opportunities. Special provisions are made to address the unique needs and challenges faced by these groups and promote their inclusion and participation in lifelong learning programs.

6. Promotion of Digital Literacy:

In line with the digital transformation agenda of NEP 2020, adult education and lifelong learning initiatives focus on promoting digital literacy and proficiency among adults to enable them to participate effectively in the digital economy and society. Programs are designed to impart basic and advanced digital skills, including computer literacy, internet usage, digital communication, and online collaboration, to bridge the digital divide and ensure that no one is left behind in the digital age.

7. Cultural and Heritage Preservation:

Lifelong learning programs under NEP 2020 aim to promote cultural awareness, heritage preservation, and traditional knowledge among adults to enrich their lives and preserve India's rich cultural diversity. Adult education initiatives include provisions for cultural literacy, arts education, heritage conservation, and community-based learning activities to foster appreciation for India's cultural heritage and promote intergenerational dialogue and exchange of knowledge.

Adult Education Curriculum Framework and NEP 2020:

The National Education Policy (NEP) 2020 of India emphasizes the importance of adult education as a vital component of lifelong learning and aims to create a flexible and inclusive education system that caters to learners of all ages. Adult education curriculum framework aligns with the key principles and provisions of NEP 2020:

1. Flexible and Multidimensional Curriculum:

NEP 2020 advocates for a flexible curriculum framework that accommodates diverse learning needs and interests. Similarly, the adult education curriculum should be designed to offer a range of learning pathways and program options, allowing adults to pursue education aligned with their goals, preferences, and prior knowledge.

2. Integration of Vocational Education and Skill Development:

NEP 2020 emphasizes the integration of vocational education and skill development across all levels of education, including adult education. The curriculum framework for adult learners should incorporate practical skills training, job-oriented courses, and industry-relevant certifications to enhance their employability and promote lifelong career advancement.

3. Recognition of Prior Learning and Experiential Learning:

NEP 2020 highlights the importance of recognizing and accrediting prior learning experiences. The adult education curriculum framework should provide mechanisms for assessing and certifying the

knowledge, skills, and competencies acquired through informal and non-formal learning contexts, thereby facilitating the seamless integration of adult learners into formal education pathways.

4. Technology-Enabled Learning:

With the rapid advancement of technology, NEP 2020 underscores the need to harness digital tools and platforms to enhance learning outcomes. The adult education curriculum framework should leverage technology-enabled learning resources, such as online courses, multimedia tutorials, and mobile applications, to make education more accessible, interactive, and engaging for adult learners.

5. Holistic Development and Lifelong Learning Skills:

NEP 2020 emphasizes the holistic development of learners, focusing not only on academic knowledge but also on critical thinking, creativity, communication, and social-emotional skills. Similarly, the adult education curriculum framework should encompass a broad range of learning objectives, including personal development, citizenship education, health awareness, financial literacy, and environmental sustainability, to empower adult learners to lead fulfilling and responsible lives.

6. Community Engagement and Participatory Learning:

NEP 2020 underscores the importance of community participation in the education process. The adult education curriculum framework should promote collaborative and participatory learning approaches, involving adult learners, educators, community leaders, and other stakeholders in curriculum design, implementation, and evaluation. Community-based learning initiatives, such as literacy campaigns, skill development workshops, and local heritage projects, can enrich the learning experience and foster a sense of ownership and belonging among adult learners.

7. Inclusive and Equity-centred Education:

NEP 2020 advocates for inclusive and equity-centred education that addresses the needs of marginalized and disadvantaged groups. The adult education curriculum framework should be sensitive to the diverse socio-cultural backgrounds, languages, and learning abilities of adult learners, ensuring equal access, participation, and opportunities for all. Special provisions should be made to reach out to underserved populations, such as rural communities, women, persons with disabilities, migrant workers, and indigenous groups, and tailor the curriculum to meet their specific needs and aspirations.

The development of an effective adult education curriculum framework is integral to realizing the objectives of NEP 2020 and promoting lifelong learning opportunities for all. By aligning with the key principles and provisions of NEP 2020, the adult education curriculum framework can ensure that adult learners receive quality education that empowers them to lead productive, fulfilling, and socially responsible lives.

Adult Education and Lifelong Learning related Program:

A centrally sponsored scheme 'Saakshar Bharat' was implemented during 2009-10 to 2017-18 to raise literacy rate to 80%, reduce gender gap to 10% and minimize regional and social disparities, with focus on Women, SCs, STs, Minorities and other disadvantaged groups. All those districts that had female literacy rate below 50% as per census 2001 including Left Wing Extremism affected districts, irrespective of their literacy level, were covered under the scheme. The principal target was to impart functional literacy to 70 million non-literates including 60 million women. The scheme covered 404 districts in 26 States and 1 Union Territory covering about 1.64 lakh Gram Panchayats.

During the implementation of Saakshar Bharat scheme, against the overall target of making 7 crore adult non-literates as literates, around 7.64 crore learners, having passed the biannual Basic Literacy Assessment Tests conducted by National Institute of Open Schooling (NIOS) between August, 2010 to March, 2018, were certified as literates.

Adult Education Bureau has its office housed at Department of School Education & Literacy, Ministry of Education, Shastri Bhawan, New Delhi. Adult Education Bureau is divided into six sections and every section has its own mandate of work and responsibilities.

National Literacy Mission Authority (NLMA) - NLMA is responsible to design, develop and implement Adult Education Program in the country. It formulates and exercises policy and planning, developmental and promotional activities, operational functions, technology demonstration, leadership training, resource development, research & development, monitoring & evaluation in the country. NLMA consists of two bodies: (i) Governing Council headed by Hon'ble Education Minister and (ii) Executive Committee of NLMA is headed by Secretary (SE&L). Joint Secretary (Adult Education) is the Member Secretary of the Committee.

Directorate of Adult Education - Directorate of Adult Education (DAE) is the subordinate office under the Department of School Education & Literacy, Ministry of Education, Government of India. It functions to facilitate the implementation of adult education programs in the country. It provides professional, academic and technical guidance for effective implementation of programs launched under the aegis of National Literacy Mission Authority and monitors progress of the programs implemented in the field through State Governments and other agencies.

Padhna Likhna Abhiyan (PLA) –

A centrally sponsored scheme of Adult Education, Padhna Likhna Abhiyan (PLA) was approved on 25.04.2020 during the Covid-19 pandemic with a financial outlay of Rs.142.61 crore including central share of Rs.95.25 crore to implement in all 36 States/UTs in both urban and rural areas in the country. The main objective of PLA was to impart Functional Literacy to 57 lakh non-literates of 15 years and above age group in the country during F.Y. 2020-21. However, due to COVID-19 pandemic situation, initially the scheme was suspended by Department of Expenditure, Ministry of Finance. Thereafter, in response to our request, the suspension of PLA scheme was revoked during August 2020 by the Department of Expenditure (DoE), Ministry of Finance (MoF) allowing us to run the Scheme upto 31.03.2021. The funds were released under the Scheme during December 2020 to February 2021 to 33 States/UTs other than Goa, Maharashtra and West Bengal as no proposal was submitted by these 3 States. Considering the Covid-19 pandemic situation in the country, implementation of this PLA scheme has been extended by the Department of Expenditure till 31st March, 2022 within the approved budgetary outlay.

Conclusion:

The new Education Policy of 2020 has changed the term "adult education" to "education for all" under the "New India Literacy Programme" for the years 2022–2027. The program is run by volunteers, and students and teachers registered under the Unified District System for Education (UDISE) is participate. In conclusion, adult education and lifelong learning are integral components of India's National Education Policy 2020, aimed at fostering inclusive and equitable education for all. By recognizing the diverse learning needs of individuals across their lifespan and promoting a culture of continuous learning, NEP 2020 seeks to empower individuals, strengthen communities, and propel national development. However, realizing the transformative potential of adult education requires sustained commitment, collaboration, and innovation from all stakeholders. Through collective action and strategic interventions, India can harness the power of adult education to build a more prosperous, resilient, and knowledge-driven society.

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TECHNOLOGY BASED ASSESSMENT IN EDUCATION: NEED OF THE HOUR

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Abstract

Technology is a powerful ally for teachers, especially in measuring student learning. With the use of digital formative assessments, teachers can expedite their ability to provide student feedback in real-time. Also, students are interacting with their assignments, receiving teacher input, and invested and motivated in their learning (Timmis et al., 2016).Assessment is a critical component of the education system, as it provides feedback to learners, teachers, and stakeholders on learning progress and achievement. Today's paradigm has shifted from traditional methods to tech-enabled, participatory processes and this is where technology plays a key role. Using advanced technological tools for assessing students' interests, weaknesses and their readiness will help educators refine their teaching tactics and make that giant leap in making their students excel.

Key words: Technology, Online Assessment tool

Introduction

To transform assessment using technology, it is however important to have a plan and a clear understanding of the goals and objectives of the assessment. Educators must first determine which assessment strategies will be most effective for their students' learning needs. This includes identifying the type of assessment, the technology tools required, the resources needed, and the evaluation and feedback processes. It may require experimenting with different tools and platforms to determine which ones are most effective. It is also important to ensure that the technology tools used are reliable and secure, and that appropriate training and support are provided to teachers and students (Lynch, 2019).Additionally, collaboration and communication among teachers, students, and other stakeholders are essential to ensure the success of technology-enhanced assessments**.**

Need and importance of Assessment using technology

➢ . Technology-enhanced assessments offer several benefits, such as increased efficiency, reduced cost, and more accurate and timely feedback being provided to both teachers and students that can enable more personalized learning experiences(Lynch,2018) and facilitate collaboration and communication among teachers and students.

➢ Technology allows for a more diverse range of assessment types, including formative assessment s which involve gathering feedback on student learning to inform instruction, help teachers and learners to adjust learning strategies, and identify areas of strength and weakness.

➢ Online platforms and tools enable teachers to quickly and easily collect and analyze student data, providing them with valuable insights into student progress and needs.

➢ Technology can help to facilitate more authentic assessments that more closely resemble real-world scenarios, which can provide a more accurate representation of a students' abilities.

➢ Digital portfolios allow students to showcase their learning progress and achievements through a collection of digital artefacts. This type of assessment can provide a more comprehensive and authentic representation of the students' abilities, by allowing them to showcase their work in a multimedia format. Students can include videos, images, and written reflections on their work, providing a more comprehensive view of their abilities than traditional paper-based assessments

Types of technology assisted assessments

The various technology-assisted assessments include online, computer-based, and mobile assessments (Kim, 2011). The choice of technology for the assessment will depend on the specific needs and context of the test taker and the institution. These technology types have unique features and functions and there are some key differences between them:

Online assessments: delivered over the internet, they typically require the test taker to log on to a website or platform to access the assessment. Online assessments can be taken on any device with an internet connection, such as a desktop computer, laptop, or tablet. They are often used for high-stakes testing, such as college entrance or professional certification exams.

Computer-based assessments: delivered on a computer or laptop, but not requiring an internet connection, they are often installed on the test taker's computer or provided on a secure testing center computer. Computer-based assessments may offer more advanced features, such as multimedia elements or adaptive testing.

Mobile assessments: delivered on mobile devices, such as smartphones or tablets,they are often used for formative assessments, quizzes, or surveys. Mobile assessments are convenient and can be taken on the go, but may have limitations in terms of screen size and functionality.

Following Online Assessment tool can be used in teaching and learning and evaluation

Assessment Generator, Award Force, ClassMarker, Criteria, Edmodo, EVA-SSESS, Exam Time Flubaroo, iMocha,Inspera, Assessment, Qualified, Learning Pod, McQuaig, Moodle, ProProfs, Smooth Hiring, Socrative, StoryPulse, Test Gorilla, Test Moz, Trivie, Weave, Quibblo, Zoho Challenge, Quizizz, That Quiz, Kahoot!, Nearpod, Lumio by SMART, Schoology etc

Popular forms of formative assessment include class polls and online quizzes that can be delivered through a **learning management system (LMS) or an online quiz platform**. Teachers can create quizzes that test students' knowledge and provide immediate feedback, thus allowing them to adjust instruction based on the results and to provide personalized support to individual students..

Additionally, According to a study by Doheny-Farina and Bower (2019), **simulation software** can provide an authentic assessment of students' abilities by allowing them to engage in simulated scenarios that are similar to real-world situations. Also, **augmented and virtual reality** can provide students with immersive learning experiences that simulate real-world scenarios. For instance, an architecture student can use virtual reality to design and experience a 3D model of a building or structure, providing an authentic assessment of their ability to apply theoretical concepts in a practical context. Another example is **video-based assessments**, which require students to demonstrate skills and knowledge through video recordings and provide an authentic representation of their abilities. This ensures that the assessment is personalized to the learner's ability level, which can increase motivation and engagement, providing a more accurate and detailed picture of a students' knowledge and skills.

Digital portfolios can help individuals develop their digital literacy skills and create a positive digital identity. As Dennen and Burner (2018) noted, digital portfolios can help students to develop "21st-century skills, such as information literacy, media literacy, and digital citizenship" (p. 66). By creating a positive digital presence, students can showcase their achievements and skills to potential employers and academic institutions.

Technology can also facilitate collaboration and communication among teachers and students, which can lead to more meaningful assessment experiences. By using online collaboration tools, online discussion forums, video conferencing, and messaging platforms, students can communicate and work

together in real-time, breaking down the barriers of time and space. Utilizing shared spaces for projects and assignments, teachers and students can create and assess assignments live, providing immediate feedback and fostering a collaborative learning environment. Technology can also enable peer review, allowing students to assess and provide feedback on each other's work, promoting a sense of community and shared responsibility for learning (Moore, 2022).

Challenges in the use of digital technologies in assessment

Although the use of digital technologies in assessment offers a range of benefits over traditional paper-based assessment from increased convenience and accessibility to improved security and increased engagement – it is essential to note that digital technologies are not a replacement for conventional assessment methods. Digital technologies, such as online assessments, computer-based assessments, and mobile assessments, may have limitations in terms of security, accessibility, and reliability. For instance, internet connectivity issues or technical problems with hardware or software may negatively impact the assessment experience. Also, digital assessments may introduce new biases and fairness concerns that need to be addressed. For example, certain populations may be disadvantaged due to differences in technology access and/or familiarity with digital platforms.

Rather, digital technologies should be used in combination with traditional methods to create a well-rounded assessment approach that provides a comprehensive picture of student knowledge and skills. In some cases, traditional assessment methods, such as written exams or hands-on assessments, may be better suited to assess specific skills or competencies. The choice of assessment method should be based on a variety of factors, including the goals of the assessment, the needs and preferences of the students, and the context in which the assessment is being administered.

Conclusion

Digital technologies have revolutionized the assessment process, offering new and innovative ways to measure student learning and progress. The traditional model of assessment, which is mostly paper-based and relies majorly on standardized tests and grading, has been criticized for its limitations in providing a comprehensive picture of student learning and progress. Therefore, the integration of technology in assessment has become a popular and promising solution to address these limitations.

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TEACHER LEADERSHIP AND MENTORSHIP

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Abstract

This paper focuses on teachers' voices, their knowledge building, and teacher leadership—an essential aspect of the work of the Leadership for Learning Network, which is the subject of this special issue. How these ideals are put into practice enables educators to take the lead in innovation and advance the field of professional knowledge. While the caliber of instruction has a significant impact on student motivation and accomplishment, it has long been maintained that the caliber of leadership has an impact on teacher motivation and caliber of instruction in the classroom. Beyond the confines of their classrooms, teacher leaders take on the difficulties of enhancing their teaching methods by collaborating with their peers, school administration, professional staff, and students and their families. The fact that "leadership" is not a job title or position is one of the ambiguities in defining and recognizing teacher leaders. Being a "team leader" is not the same as being a teacher leader; in most schools, there are teachers who are the appointed leaders of their grade level teams or departments.

Keywords: Educational Leadership, Teacher, Mentorship, Skill.

Introduction:

Effective leadership is widely accepted as being a key constituent in achieving school improvement. The evidence from the international literature demonstrates that effective leaders exercise an indirect but powerful influence on the effectiveness of the school and on the achievement of students (Leithwood et al, 1999). Whilst the quality of teaching strongly influences levels of pupil motivation and achievement, it has been consistently argued that the quality of leadership matters in determining the motivation of teachers and the quality of teaching in the classroom (Fullan, 2001; Segiovanni, 2001). A preliminary glance at the leadership research literature however reveals that it is largely premised upon individual impetus rather than collective action and offers a singular view of leadership predominantly bound up with headship.

Teacher leadership is a process. Teacher leaders are the professionals who carry through with this process to lead change in their schools for the benefit of all students. Teacher leaders step outside their classroom doors and accept the challenges to improve their practice through working with colleagues, school administration and professional staff—as well as students and their families. One of the confusions in defining teacher leadership and identifying teacher leaders is that "leadership" is not found in a position or title. In most schools there are teachers who are the designated leaders of their grade level teams or departments, but being named a "team leader" is not the same as being a teacher leader. Teacher leaders exemplify certain defining characteristics. While all teachers possess several of these traits, only teacher leaders consistently and simultaneously integrate them into teacher leadership.

Objectives of the study:

1) To explore the evidential base concerning teacher leadership and school/classroom improvement.

2) To consider how teacher leadership can be enhanced or developed.

3) To identify areas for future research and development

Operational Definitions of the Terms Used:

1. **Educational Leadership:**

Educational leadership has become a priority in education policy programs worldwide. It plays a crucial role in refining school outcomes by influencing the motivations and capabilities of the teachers,

as well as the school climate and environment. Operative educational leadership is vital to improve the efficiency and pertinence of education. Educational leadership responsibilities should be adequately defined through an understanding of the practices that are required to make an improvement in teaching and learning. In many countries, the school administrators and the principals have heavy work-loads, they are over-burdened with work. Most of these individuals are reaching the retirement age and it is difficult to find leaders with capabilities and competencies. Educational leadership functions can contribute in making provision of guidance on the main characteristics, tasks and responsibilities of proficient leaders in the field of education.

2. Teacher as Leader:

Teaching is considered as an extremely intellectual effort. Teachers have to lead the classroom, students, and colleagues. The Teacher, who has formally or informally gained leadership positions, is generally termed a teacher leader, who can bring changes in the institution. When a teacher leads, they create good climate for learning that influences the school community. In order to be successful with their students and colleagues, the teachers need to learn a variety of skills while on their job viz., developing rapport, scrutinizing institutional conditions, supervision of students in and out of the classroom, inculcating skills and confidence in others.

3. The role of Teacher Leaders:

As a leaders teacher has to play many roles some among are Resource Provider, Instructional Specialists, Curriculum Expert, Classroom Supporter, Learning Facilitator, Mentor, School Leader, Data Coach and Catalyst for Change and Learner.

Need and Significance of the Study:

In education, there has been a concern with the leadership skills of the school/college as a decision maker, primarily because of his location in the hierarchy of authority and responsibility within the organization. It seemed appropriate and proper that efforts to be made to study the leadership skills and hopefully, improper the ability of this individual in this capacity. It has been disclosed by the study that the leadership skills of principals are of great significant at college level. The /principals of most of the colleges particularly those of PU level colleges in India have to face so many leadership skills problems with regard to their academic work. The proposed study aims to study leadership skills and professional commitment of the principals. On this theme little research has been conducted therefore there is a need to investigate the PU college principal's leadership skills and their professional commitment.

Review of related literature:

1) **Bartlett and Bartling (2007):** assessed self-perceived leadership styles practiced by adult educators and graduate-level adult education students adopting transformational leadership theory embodied in the Full Range of leadership Model. Results showed significant differences between practitioners and graduate students in mean scores for the transformative and transactional leadership style.

2) **Abedi Jafari and Moradi (2005)**: in their research entitled "Studying the Relationship between Emotional Intelligence and Transformational Leadership" studied the relationship between emotional intelligence and transformational leadership. The result showed that there is a significant relationship between emotional intelligence and transformational leadership and all subscales of emotional intelligence excluding motivation had a significant relationship with transformational leadership.

3) **Herron and Howell (2004)**: conducted an Investigation on "Major Community College Leaders Attitudes toward Problem-Based Learning as a Method for Teaching Leadership" to examine attitude of community college leaders towards problem-based learning as a method of teaching leadership. The

participants were taught by Problem Based Learning method in community college leadership academy for a period of one year. Results show their positive belief in problem-based learning as an effective method of instruction and helped the participants to develop their knowledge of leadership.

4)**Meschede, Fiebranz, Moller and Steffensky (2017)** surveyed 110 in service teachers to determine their professional vision, pedagogical content, investigate knowledge and beliefs. The research findings concluded that in service teachers had greater professional vision, content knowledge and beliefs when compared with pre service teachers.

5) **Politis (2017)** conducted research to analyze gender differences in occupational commitment. The study was conducted on professional employees by using self prepared questionnaire with dimensions like; work place, incivility, affective occupational commitment and burnout. The research findings demonstrated that females' professionals possess higher organizational commitment when compared with men.

DEFINING TEACHER LEADERSHIP AND MENTERSHIP:

1. **Roles and Responsibilities:** As the limitations of singular or individual leadership have become increasingly evident there has been a groundswell. Here teacher leadership is primarily concerned with enhanced leadership roles and decision-making powers for teachers without taking them out of the classroom. A number of authors have provided definitions of the teacher leadership that clearly delineate the differences with traditional leadership approaches. For example, Wasley (1991) defines teacher leadership, as 'the ability to encourage colleagues to change, to do things they wouldn't ordinarily consider without the influence of the leader'. Katzenmeyer and Moller (2001) see teacher leadership as having three main facets:

   • **leadership of students or other teachers**: facilitator, coach, mentor, trainers, curriculum specialist, creating new approaches, leading study groups;

   • **leadership of operational tasks**: keeping the school organised and moving towards its goals, through roles as Head of Department, action researcher, member of task forces;

   • **leadership through decision making or partnership:** membership of school improvement teams, membership of committees, instigator of partnerships with business, higher education institutions, LEA's, and parent-teacher associations.

   A **second dimension** of the teacher leader role focuses upon participative leadership where all teachers feel part of the change or development and have a sense of ownership. Teacher leaders may assist other teachers to cohere around a particular development and to foster a more collaborative way of working (Blase and Anderson, 1995). They work with colleagues to shape school improvement efforts and take some lead in guiding teachers towards a collective goal.

   A **third dimension** of teacher leadership in school improvement is the mediating role. Teacher leaders are important sources of expertise and information. They are able to draw critically upon additional resource and expertise if required and to seek external assistance. Finally, a fourth and possibly the most important dimension of the teacher leadership role, is forging close relationships with individual teachers through which mutual learning takes place.

2. **Collaboration and Collegiality:** The literature emphasizes that teacher leadership is not just concerned with teachers developing individually but a central role of teacher leaders is one of helping colleagues to try out new ideas and to encourage them to adopt leadership roles (Lieberman, et al, 2000). Teacher leadership is premised upon a power re-distribution within the school, moving from hierarchical control to peer control. In this leadership model the power

base is diffuse and the authority dispersed within the teaching community. An important dimension of this leadership approach is the emphasis upon collegial ways of working.

This work highlights the following structuring behaviours:

• Distributing the responsibility and power for leadership widely throughout the school;

• Sharing decision making power with staff;

• Allowing staff to manage their own decision making committees; • taking staff opinion into account;

• Ensuring effective group problem solving during meetings of staff;

• Providing autonomy for teachers;

• Altering working conditions so that staff have collaborative planning time;

• Ensuring adequate involvement in decision making related to new initiatives in the school;

BENEFITS OF LEADERSHIP AND MENTERSHIP:

• Improving School Effectiveness

• Improving Teacher Effectiveness

• Contributing to School Improvement

• Distributing the responsibility and power for leadership widely throughout the school;

• Sharing decision making power with staff;

• Allowing staff to manage their own decision making committees;

• Taking staff opinion into account;

• Ensuring effective group problem solving during meetings of staff;

• Providing autonomy for teachers;

• Altering working conditions so that staff have collaborative planning time;

• Ensuring adequate involvement in decision making related to new initiatives in the school.

BARRIERS TO LEADERSHIP AND MENTERSHIP:

• Organizational Barriers

• Professional Barriers

GENERATING AND SUPPORTING TEACHER LEADERSHIP:

1. Principals or head teachers have been found to play a key role in developing teacher leadership. identify develop and support teacher leaders in their schools, principals needed to encourage teachers to become leaders, help teachers develop leadership skills and provide positive and limited constructive feedback.

2. Time needs to be set aside for professional development and collaborative work. Making time for planning together, building teacher networks, and visiting classrooms is important. the factors for successful teacher leadership included principal support, strong communicative and administrative skills, an understanding of organizational culture and a reexamination of traditional patterns of power and authority in school systems.

3. Teacher leaders need opportunities for continuous professional development in order to develop their role. most effective, teacher leaders need to continuously improve their teaching skills, be involved in school decision making and be involved in the professional development.

4. Preparing teacher leaders is the need to equip them with good interpersonal skills.
   • Building trust and rapport with colleagues
   • Being able to undertake organizational diagnosis through data collection
   • Understanding and managing change processes
   • Being able to utilize resources (people, equipment) in the pursuit of common goals.
   • Building skills and confidence in others

Conclusion:

The concept of teacher leadership is powerful because it is premised upon the creation of the collegial norms in schools that contribute directly to school effectiveness, improvement and development. It is also powerful because it recognizes that all teachers can be leaders and that their ability to lead has a significant influence upon the quality of relationships and teaching within the school. At its most profound, teacher leadership offers a 'new professionalism' based upon mutual trust, recognition, empowerment and support.

At its most practical it provides a way of teachers working together in order to improve the learning experiences of young people. It reclaims leadership as a human, collective endeavor in which all teachers play an essential role. Continuing to teach and to improve individual teaching proficiency and skill organizing and leading peer review of teaching practices providing curriculum development knowledge participating in school level decision making leading in service training and staff development activities engaging other teachers in collaborative action planning, reflection and research. Teacher leaders not only make learning possible for others but in important ways are learning a great deal themselves. Through stepping out of the confines of the classroom, teacher leaders forge a new identity in the school and create ways of engaging others in development work. This new role embraces a belief that there are different ways to structure schools and a different way of working with teachers.

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RELATIONSHIP BETWEEN SELF-DETERMINATION AND TEACHER EMPOWERMENT OF GOVERNMENT UPGRADED SCHOOL TEACHER'S IN SHIVAMOGGA DISTRICT

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Abstract

Empowered teachers are more likely to innovate in their teaching methods, influence school policy, and effectively contribute to student success. One crucial factor influencing teacher empowerment is self-determination, which refers to an individual's ability to control their own actions and decisions. The present study attempts to study relation between Self-Determination and Teacher Empowerment of Government Upgraded School in Shivamogga districts The objectives of the study the relationship between Teacher Empowerment with Self-Determination among government Upgraded school teachers and study the mean significant difference in various components related to Self Determination among government Upgraded school teachers with respect to educational Qualification. The study was a descriptive survey in order to know relationship of variables. It is correlational and casual-comparative in nature and comprised 405 teachers out of the total pool of 756 teachers. This study clearly showed that Teacher Empowerment and Self-Determination of Upgraded School Teachers have a Significant Relationship and study is inferred that "there is a Mean significant differences between in self-determination among government upgraded school teacher with respect to their Educational qualification" relationship of Educational Qualification on Self-Determination the significant difference in self-determination scores based on qualifications ('F'=10.246, p<0.05) highlights the importance of teachers' educational background in shaping their motivation and empowerment and Enhancing teacher self-determination can thus lead to better academic performance and a more positive educational experience for students.

Key words; - self-determination, Educational Qualification. Teacher empowerment

Introduction;-

Teacher empowerment is a vital element in enhancing the overall quality of education, especially in government-upgraded schools that are undergoing transformations to improve their resources, infrastructure, and teaching environments. Empowered teachers are more likely to innovate in their teaching methods, influence school policy, and effectively contribute to student success. One crucial factor influencing teacher empowerment is self-determination, which refers to an individual's ability to control their own actions and decisions.

Self-determination is closely linked to Self-Determination Theory (SDT), which emphasizes three core psychological needs autonomy, competence, and relatedness. When these needs are met, individuals, including teachers, experience greater motivation and fulfillment, which can enhance their sense of empowerment. In the context of government-upgraded schools, where new challenges and opportunities arise, understanding how self-determination influences teacher empowerment is essential for improving educational outcomes.

A teacher's educational qualification plays a pivotal role in shaping their sense of self-efficacy, competence, and ultimately their empowerment. Teachers with higher qualifications may feel more confident in their abilities to influence classroom dynamics, engage students, and contribute to school-wide decision-making processes. They are likely to have deeper subject knowledge, advanced pedagogical skills, and a greater sense of professional identity. However, the relationship between

educational qualification and teacher empowerment is not always linear; it can vary based on other factors such as school support, leadership, and available resources.

Review related literature;-

Thomas K. F. Chiu's (2022) study explored teacher technology integration through the lens of Self-Determination Theory (SDT). Over 22 months, 122 teachers participated in a school support intervention, focused on leader, expert, and peer support, to boost motivation for technology use. The intervention aimed to meet teachers' psychological needs, improving high-quality (student-centered) technology practices while maintaining both high- and low-quality (lecturing) methods. Data was collected via questionnaires and interviews. The study offers two theoretical advances on teacher motivation, three empirical insights into technology integration practices, and four practical recommendations for improving educational support systems.

Richard M. Ryan and Edward L. Deci (2020) explored intrinsic and extrinsic motivation through the lens of Self-Determination Theory (SDT), emphasizing how fulfilling students' psychological needs for autonomy, competence, and relatedness enhances motivation and psychological well-being in educational settings. Their study highlights the dynamic relationship between teacher and student motivation, where institutional constraints and policies often hinder optimal teaching practices. They point out a gap between current educational policies and modern motivational research, as many outdated models fail to address the needs of both students and teachers, affecting educational outcomes and practices globally.

Significance of the study;-

This study aims to investigate the impact of self-determination on teacher empowerment in relation to their educational qualifications in government-upgraded schools. By examining this relationship, the study will provide valuable insights into how educational qualifications affect teachers' autonomy, competence, and relatedness, and how these factors, in turn, influence their empowerment. This research will be critical for developing strategies to support teachers with varying qualifications, ensuring that all teachers, regardless of their educational background, feel empowered to contribute effectively to their schools.

Objectives of the Study:-

The objectives of the study are as follows: -

1. To study the relationship between Teacher Empowerment with Self-Determination among government Upgraded school teachers.

2. To study the mean significant difference in various components related to Self Determination, among government Upgraded school teachers with respect to educational Qualification.

Hypothesis of the Study:-

1. There is no significant relationship between Teacher Empowerment and Self Determination of upgraded schools' teachers.

2. There is no significant difference in Self-Determination and their components among upgraded school teachers with respect to their educational qualification.

Methodology of the study:-

The study will be designed of a descriptive survey in order to know The Impact of Self-Determination on Teacher Empowerment of Government Upgraded School Relation to Their Educational Qualification

Variables of the Study:-

➢ Teacher Empowerment

➢ Self-Determination.

➢ Educational Qualification (D.ED, UG with B. ED, PG with B. ED)

Population and Sample:-

The population for the present study comprised Researcher selected Randomly 405 teachers out of the total pool of 756 teachers. This random selection helps ensure that sample is not biased and is a representative subset of teachers from the government upgraded schools in the shivamoga district Out of the 121 upgraded schools, researcher selected 77 schools for the present research

Tools used for the Study:-

● Self Determination Scale (2022) **by Yashavantha.B and Dr. Manjunath H P**

This 5 point rating scale includes 33 items of seven components Self-Awareness, Self Advocacy, Choice Making, Self-Management Positive Attributes , Self-Observation and Goal Settings Cronbach's alpha reliability was found to be 0.789

Data analysis Techniques used for the study:-

Statistical Techniques such as Quartile Deviation Percentage Analysis, mean, standard deviation and correlation was used. To find out the difference between of variables ANOVA was carried out.

Analysis of the data;-

Objective-1: To study the relationship between Teacher Empowerment with Self-Determination among government Upgraded school teachers.

To full fill the above objective researcher formulated the following null hypothesis-

Hypothesis-1: There is no significant relationship between Teacher Empowerment and SelfDetermination of upgraded schools' teachers.

Table-01: Table shows 'r' values of Correlation between Teacher Empowerment and Self-Determination.

		Self-determination
Teacher Empowerment	Pearson Correlation	0.624**
	Sig. (2-tailed)	0.000
** Correlation is significant at the 0.01 level (2-tailed). [Total (N) =405]		

According to Table 02, the derived 'r' value of 0.624 is positive and significant at the 0.01 level. As a result, the null hypothesis (1) is rejected, and it is further concluded that "Teacher Empowerment and Self-Determination of Upgraded School Teachers Have a Significant Relationship"

The significance level (p-value) of less than 0.01 indicates that the correlation observed is unlikely to have occurred by random chance. In other words, there is strong evidence to suggest that the observed correlation between teacher empowerment and self-determination is a real and meaningful relationship
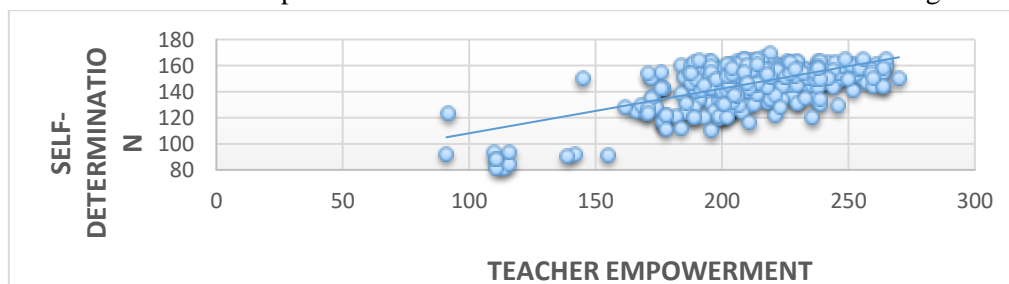
Graph 01: scatter plot shows Correlation between Teacher Empowerment and Self-Determination of Upgraded school teachers.

Graph 01, the data shown on the graph resembles a line ascending from left to right. The two sets of data have a positive correlation because the line's slope is positive. This indicates that based on the evidence, teacher empowerment is improved by strong self-determination.

Objective-3: To study the mean significant difference in various components related to SelfDetermination, among government Upgraded school teachers with respect to educational Qualification.

To full fill the above objective researcher formulated the following null hypothesis-2

> **Hypothesis-2:**There is no significant difference in Self-Determination and their components among upgraded school teachers with respect to their educational qualification.
>
> To fulfill the Hypothesis-2 researcher formulated following Sub-hypothesis 2.1 to 2.8

Table No 2. Shows that the obtained Mean value of self-determination and there components among upgraded school teachers with respect to their educational qualification.

		N	Mean	Std. Deviation
Self-Awareness	DED/TCH	126	22.5397	3.38385
	UG+BEd.	193	23.2280	2.51865
	PG+BEd.	86	23.1860	2.18288
	Total	405	23.0049	2.76738
Self-Advocacy	DED/TCH	126	13.3413	2.07138
	UG+BEd.	193	13.8964	1.95779
	PG+BEd.	86	13.9884	1.46724
	Total	405	13.7432	1.91741
Choice Making	DED/TCH	126	29.9206	4.84909
	UG+BEd.	193	31.3523	3.93703
	PG+BEd.	86	31.8488	3.17534
	Total	405	31.0123	4.16401
Self-Management	DED/TCH	126	17.5714	2.90772
	UG+BEd.	193	18.6321	2.56872
	PG+BEd.	86	18.6163	1.92915
	Total	405	18.2988	2.60276
Positive Attributes	DED/TCH	126	20.1825	3.36191
	UG+BEd.	193	21.4663	2.83030
	PG+BEd.	86	21.5000	2.83984
	Total	405	21.0741	3.05955
Self Observation	DED/TCH	126	21.4683	3.84850
	UG+BEd.	193	22.3990	2.96181
	PG+BEd.	86	22.4302	2.51368
	Total	405	22.1160	3.20486
Goal Settings	DED/TCH	126	16.6270	2.85863
	UG+BEd.	193	17.7047	2.64000
	PG+BEd.	86	17.8256	1.93538
	Total	405	17.3951	2.62640
Self Determinanation	DED/TCH	126	141.6508	18.62743
	UG+BEd.	193	148.6788	14.04088

PG+BEd.	86	149.3953	10.20528
Total	405	146.6444	15.30780

Table No 3. Shows that the obtained 'F' value of self-determination and there components among upgraded school teachers with respect to their educational qualification.

	components		Sum of Squares	df	Mean Square	F	Sig.
I	**Self-Awareness**	Between Groups	39.696	2	19.848	2.612	Not significant
		Within Groups	3054.294	402	7.598		
		Total	3093.990	404			
II	**Self-Advocacy**	Between Groups	30.053	2	15.026	4.151	significant
		Within Groups	1455.241	402	3.620		
		Total	1485.294	404			
III	**Choice Making**	Between Groups	232.656	2	116.328	6.905	significant
		Within Groups	6772.283	402	16.846		
		Total	7004.938	404			
IV	**Self-Management**	Between Groups	96.774	2	48.387	7.368	significant
		Within Groups	2640.075	402	6.567		
		Total	2736.849	404			
V	**Positive Attributes**	Between Groups	145.445	2	72.723	8.040	significant
		Within Groups	3636.333	402	9.046		
		Total	3781.778	404			
VI	**Self-Observation**	Between Groups	76.811	2	38.406	3.791	significant
		Within Groups	4072.734	402	10.131		
		Total	4149.546	404			
VII	**Goal Settings**	Between Groups	108.772	2	54.386	8.164	significant
		Within Groups	2678.018	402	6.662		
		Total	2786.790	404			
VII	**Self Determination**	Between Groups	4591.524	2	2295.762	10.246	significant
		Within Groups	90077.276	402	224.073		
		Total	94668.800	404			

Findings of the study;-

➢ The correlation coefficient (r) value of 0.624 indicates a relatively strong correlation between teacher empowerment and self-determination.

> The educational qualification of PG+BEd and UG+BED. group consistently report higher mean scores, followed by DED/TCH.groups like self-awareness(23.18,23.22,22.53)self advocacy(13.98,13.89,13.34)choicemaking(31.84,31.2529.92)self-management(18.61,18.63,1717.57)positive attributes(21.50,21.46,20.18) self-observation(22.43,22.39,21.46) and goal-setting(17.82,17.70,16.82. DED/TCH Teaches tend to mean score lower on these components.

> There is a significant mean difference in the Self-Determination ('F'=10.246 p<0.05) scores among teachers in upgraded schools based on their Qualifications.

> There are significant mean differences in the self-Determination components, including self-advocacy ('F'=4.151p p<0.05), choice making('F'=6.905p<0.05) self-management ('F'=7.368p<0.05) positive attributes ('F'=8.040p<0.05), self-observation('F'=3.791p<0.05) and goal setting ('F'=8.164 p<0.05) scores among upgraded school teachers based on their qualifications.

Educational implications;-

The strong correlation (r = 0.624) between teacher empowerment and self-determination suggests that enhancing teachers' sense of autonomy, competence, and relatedness is key to empowering them. Schools should focus on strategies that foster self-determination, such as encouraging autonomy in instructional decisions, providing professional development opportunities, and cultivating a supportive work environment.

Educational qualifications of teachers clearly shows mean differences in of higher education qualification like PG+BEd and UG+BED teand to high mean score it reveald that Teacher education programs (particularly DED/TCH) could include more content that emphasizes self-determination skills, such as goal-setting, self-management, and self-awareness, to equip educators better.

 Encouraging continuous professional development and further education (such as pursuing a BEd or PG qualifications) might be promoted to improve teaching quality and increase the competencies of teachers across different educational levels.

Impact of Educational Qualification on Self-Determination the significant difference in self-determination scores based on qualifications ('F'=10.246, p<0.05) highlights the importance of teachers' educational background in shaping their motivation and empowerment. Schools should provide targeted support to teachers with lower qualifications to improve their self-determination, through mentorship, workshops, and peer learning, ensuring that they feel competent and motivated.

Teachers with higher qualifications tend to excel in self-advocacy, choice-making, self-management, positive attributes, self-observation, and goal-setting. Schools should offer support to less-qualified teachers by fostering autonomy, classroom management, reflective practices, and structured goal-setting to enhance their self-determination and professional growth.

Enhancing Teacher Motivation and Student Outcomes By focusing on self-determination and its components, schools can create an environment where teachers feel more empowered, motivated, and capable, which in turn will positively impact student outcomes. Empowered teachers are more likely to engage in innovative teaching, improve student engagement, and enhance overall school performance.

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EXPLORING THE IMPACT OF INCLUSIVE PEDAGOGY ON LEARNER OUTCOMES IN DIVERSE CLASSROOMS

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Abstract

This study explores the impact of inclusive pedagogy on learner outcomes in diverse classrooms, focusing on students with varying abilities, cultures, and socio-economic backgrounds. Inclusive pedagogy promotes equity and universal access by adopting differentiated instruction and flexible curricula to address diverse learner needs. Using both quantitative and qualitative data from multiple secondary schools, the research examines academic performance, student engagement, social integration, and emotional well-being. Findings show that inclusive practices significantly improve academic and social outcomes but highlight challenges such as teacher preparedness and resource limitations. The study recommends enhancing inclusive education frameworks to ensure equity and responsiveness in diverse classrooms.

Access to Education keywords for the abstract: Inclusive Pedagogy, Diverse Classrooms, Learner Outcomes, Equity in Education, Inclusive Education Frameworks, Universal

Introduction

As classrooms become increasingly diverse, educators face the challenge of addressing the wide range of abilities, backgrounds, and learning styles present among their students. In response, inclusive pedagogy has gained attention as a strategy to create equitable learning environments that accommodate and celebrate diversity. Inclusive pedagogy involves adapting teaching practices, content delivery, and classroom interactions to ensure that all students, regardless of their social, cultural, linguistic, or cognitive differences, have the opportunity to succeed.

The objective of this research is to explore the impact of inclusive pedagogy on learner outcomes, including academic achievement, engagement, and social integration in diverse classroom settings. This article addresses the following key questions:

1. What are the core principles of inclusive pedagogy, and how do they align with the goals of contemporary education?
2. How is inclusive pedagogy implemented in diverse classrooms?
3. What are the effects of inclusive pedagogical practices on student learning outcomes and engagement?
4. How do inclusive pedagogical approaches impact the social and emotional development of students?

This study contributes to the growing body of research on inclusive education by synthesizing theoretical perspectives and empirical evidence to highlight the effectiveness of inclusive pedagogy in promoting equitable learner outcomes.

Theoretical Framework

Inclusive pedagogy is grounded in theories of social justice, equity in education, and constructivist approaches to learning. The theoretical framework for this study draws on several key educational theories:

1. Vygotsky's Social Constructivism: Emphasizes the importance of social interaction in learning and the idea that students learn best when they are actively involved in the learning process. This framework supports inclusive pedagogy by advocating for collaborative learning environments where all students can participate and contribute.

2.   Universal Design for Learning (UDL): UDL is a framework that guides the development of flexible learning environments to accommodate the needs of all learners. It encourages teachers to offer multiple means of representation, expression, and engagement, which is central to the implementation of inclusive pedagogy.

3.   Culturally Relevant Pedagogy: Developed by Gloria Ladson-Billings, this theory argues for teaching practices that affirm students' cultural backgrounds and integrate them into the curriculum. Inclusive pedagogy aligns with culturally relevant pedagogy by promoting respect for diversity and encouraging teachers to value students' cultural capital.

These theoretical underpinnings provide a foundation for understanding the role of inclusive pedagogy in addressing the diverse needs of learners and promoting academic success, equity, and social inclusion.

Methodology

This research employs a mixed-methods approach, combining quantitative and qualitative data to explore the impact of inclusive pedagogy on learner outcomes. The study consists of three primary components:

1.   Survey of Teachers: A survey will be conducted among teachers from diverse schools to gather data on their perceptions of inclusive pedagogy, the strategies they use, and the challenges they face in implementing inclusive practices. The survey will assess factors such as teacher preparedness, instructional methods, and the perceived impact on student learning.

2.   Classroom Observations: Observations will be conducted in classrooms that have adopted inclusive pedagogical approaches. These observations will focus on teacher-student interactions, instructional methods, and classroom dynamics. Data from these observations will help in understanding how inclusive pedagogy is operationalized in practice.

3.   Student Outcomes Data: Quantitative data on student performance (test scores, attendance rates, and behavioral records) will be collected to examine the relationship between inclusive teaching practices and learner outcomes. This data will be disaggregated by student demographics to assess the differential impact of inclusive pedagogy on various groups.

4.   Focus Group Interviews: Focus groups will be conducted with students to gain insight into their experiences with inclusive pedagogy, their perceptions of classroom inclusivity, and the influence on their engagement and learning.

Findings and Discussion

1.   Impact on Academic Achievement Inclusive pedagogy has been shown to positively impact academic outcomes, particularly for students from marginalized groups, including those with learning disabilities, language barriers, and lower socioeconomic backgrounds. By offering differentiated instruction and providing multiple pathways for learning, inclusive classrooms promote deeper understanding and improved performance among diverse learners.

Research indicates that when teachers utilize inclusive practices, such as scaffolding, providing culturally relevant examples, and encouraging active participation, students demonstrate higher levels of achievement. For instance, students who receive instruction in a way that aligns with their learning preferences—whether auditory, visual, or kinesthetic—tend to perform better on assessments.

2.   Enhanced Student Engagement Engagement is a critical factor in successful learning, and inclusive pedagogy fosters student engagement by creating a classroom environment that values every learner's contributions. Inclusive strategies, such as cooperative learning, peer mentoring, and the use of diverse materials and technologies, encourage active participation from all students.

Observational data suggest that students in inclusive classrooms are more likely to collaborate with their peers, participate in discussions, and engage in self-directed learning. Teachers who implement inclusive pedagogy report higher levels of student motivation and a more positive classroom atmosphere, where students feel comfortable expressing themselves and taking intellectual risks.

3.   Social and Emotional Development Inclusive pedagogy also impacts students' social and emotional well-being by promoting a sense of belonging and respect for diversity. Students in inclusive classrooms are more likely to develop positive attitudes toward peers from different backgrounds and demonstrate greater empathy and cooperation. These classrooms foster a supportive community where students feel valued and are more willing to take part in group activities, thus enhancing their social integration.

Furthermore, inclusive pedagogy contributes to the development of social skills, particularly for students with special needs, by providing opportunities for meaningful interaction with their peers in a shared learning environment. Teachers can foster these social connections by promoting collaborative tasks and peer learning.

Challenges in Implementing Inclusive Pedagogy

While inclusive pedagogy has demonstrated clear benefits, several challenges hinder its effective implementation. These challenges include:

•   Teacher Preparedness: Not all teachers feel adequately prepared to implement inclusive practices, particularly when working with students with disabilities or those who require differentiated instruction.

•   Resource Constraints: Lack of access to appropriate teaching materials, assistive technologies, and additional support staff can limit the ability of teachers to create truly inclusive environments.

•   Classroom Management: Managing diverse classrooms, especially with large class sizes, can be difficult for teachers attempting to meet the needs of all students while maintaining instructional flow.

Addressing these challenges requires ongoing professional development, policy support, and resource allocation to ensure that inclusive pedagogy can be effectively implemented in diverse educational contexts.

Conclusion

Inclusive pedagogy has a profound impact on learner outcomes in diverse classrooms by promoting academic success, enhancing engagement, and fostering social development. As the diversity of students continues to grow, the adoption of inclusive teaching practices becomes essential to creating equitable learning environments where all students can thrive. For inclusive pedagogy to be effective, however, systemic changes in teacher training, classroom resources, and institutional support are necessary.

This study underscores the importance of integrating inclusive pedagogy into teacher education programs and ongoing professional development to ensure that educators are equipped to meet the needs of diverse learners. The findings highlight the potential for inclusive practices to not only improve student achievement but also to create more inclusive and cohesive educational communities.

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IMPACT OF INTERNET OF THINGS FOR SMART AND SUSTAINABLE EDUCATION

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Abstract

The Internet of Things (IoT) has altered the educational system into a modern academic environment which is required for the recent trend. For the implementation of IoT in education it has sensors to sense the physical object, to process the operation it has processor, embedded system, networking, and cloud computing. IoT was discovered in collaboration with research and industry partners. Now IoT was found user-friendly in educational institutions which is required for the smart and sustainable education system. Students are more willing to adopt creative teaching strategies and kept high expectations from the institution. IoT technologies offer solutions for a smart, sustainable campus that will enhance student learning strategies and increase the effectiveness of daily operations inside the organization. IoT in education gives students access to new technologies that enable them to develop original concepts and reasoning for societal issues. This paper mainly explains the effect of IoT from traditional education to smart and sustainable education system.

Keyword: e-Learning, Internet of Thing, School Management, Smart Education, Sustainability Teaching.

I.   INTRODUCTION

Traditional classroom environments become weak point of sustainable education. Everyday our life styles are being changed by new technologies due to digitization, since from past ten years. A technological revolution has been brought by drastic advancements in digital devices and wireless technology. According to this scenario, the fourth industrial revolution automate the education system. At this point of development, high-quality education must be taken into account. We must take into account how technical developments can be improved in world wide. One of the most strategic plan for world economy forum identified is the implementation of workforce and education policies [1,2]. Reforming educational environments by utilizing new technology improve the educational systems which in turn enhance poor nations. Teachers should employ cutting-edge technologies in teaching process. IoT is one of the disruptive technologies, which significantly improves student performance, and quality of learning experiences for teachers in their day-to-day tasks. It also helps to the institution in terms of managing school, buildings, providing transportation for students, facilitating remote learning.

.IoT makes Smart Campus which includes smart lighting, fully secured system by connecting camera,sufficient utilization of electricity, manpower, water [3, 4]. Traditional teaching method takes more time consuming and tedious process, difficult to manage multiple task like mentoring of students, monitoring of curriculum activities. A new system is required to handle the workflow, which drastically cuts down on faculty time spent on managerial tasks and increases teaching and student engagement time, in order to maximize the use of class hours [5]. Economical and effective management is possible with the Internet of Things, with an integral component of smart components in school. Our goal in this study was to provide a comprehensive understanding of how the Internet of Things might facilitate smart school features in learning environments. The objective of digitization is to provide high-quality, sustainable education.The facilities of IoT with school and without IoT school are compared in detail in Table 1 [6,7].

Table 1: Comparison of IoT supported school with conventional school

Facility	Conventional School	IoT Supported School
Management	Management is not easy	Management is more flexible, comfortable and efficient
Security	Less safer and difficult to manage security	By connecting IoT components like sensors, campus become more safer
Energy	Energy consumption is very big challenging task in conventional manner	Energy consumption management is easy to follow
Vehicle Parking	Identification of parking space for staff, teachers and students is very difficult and time consuming	Easy to find parking place and less time consuming
Students tracking	It is very biggest task to find student in campus	Effortless task to find student in campus
Attendance	Manual attendance takes more time and tedious process	Automatic attendance system with various method
Learning	Maximum resource available for students are lecturing and her/his notes only	There are many ways to get information to students and even student can get information from remotely like distance education

II.   SMART AND SUSTAINABLE EDUCATION

A smart school refers to advanced technologically based education system either in offline or online mode which makes students more interactive learning [8]. Here "smart" describes someone who is intelligent, wise, effective, and efficient and "smart education" refers to a learning environment that helps students behave, think, and solve problems successfully. Thus, the goal of a smart school is to offer an intelligent learning environment with unrestricted access to interactive and collaborative technologies which are based on student-eccentric, personalized, and adaptive learning services [9]. Sustainability means 'strength' or 'perseverance' or 'reliability' or 'continuity of the system'. There are always chances for intelligent learning, content, pedagogy, or values to be communicated through the educational system. The general agreement is the pedagogy is the process by which students and teachers exchange information. The teacher must constantly refresh his knowledge to transfer strategies and plan of action. IoT integration provides the student with additional the knowledge. IoT plays a significant role in building a network using specialized internet based setups. Conversely, in order to meet professional demand, US universities and commercial businesses frequently provide IoT courses [10]. They have mentioned the dimension of IoT which is shown in figure 1. The Internet of Things has promise for long-term and high-quality of education system, and also other domains like healthcare, agriculture,smart cities [11-14]. Figure 2 shows the IoT smart and sustainable education paradigm. Figure 3 represents tools used for communicating with Internet of Things technologies in learning environments [wileyonlinelibrary.com.]
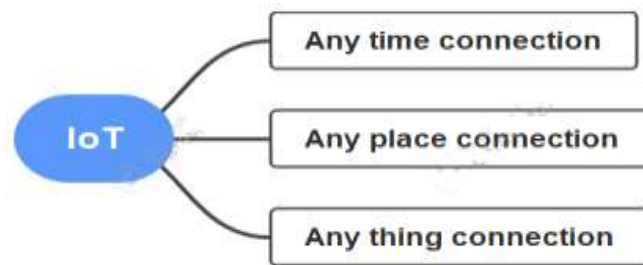
Figure 1: Dimension of IoT
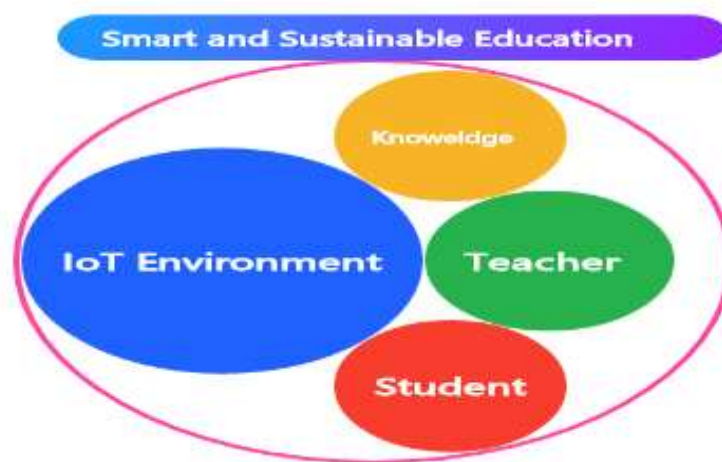
Figure 2: IoT smart and sustainable education paradigm
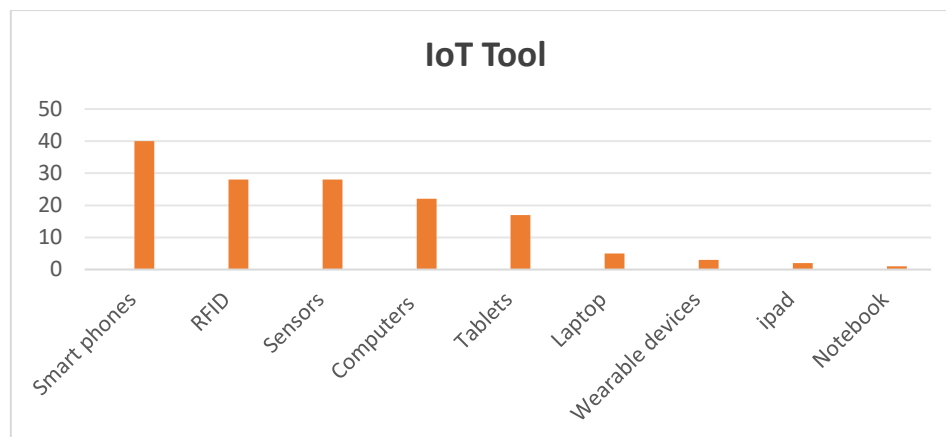
Figure 3 : IoT tools used in educational settings

III. THE APPLICATION OF IOT IN SMART AND SUSTAINBLE EDUCATION

The major of application of IoT in education system is explained in three prospective way, they are (i) School management perspective, (ii) Teacher perspective, and (iii) Student perspective. The pictorial representation of IoT system in school is shown in figure 4.

(i) Application for Management

A. Smart *Environment*

Modern IoT technology is employed in power management to boost energy efficiency and create a more sustainable future. This led to the creation of the smart grid and energy management application in educational system [15]. Based on the recorded data, a system's economy, dependability, and efficiency can be improved. The grid is used to assess the data and forecast weather conditions. This modern IoT makes normal campus into "green campus", and also creates healthier environment which indirectly improves teaching learning process.

B. Secured Campus

Keeping schools safe is very difficult, in particular large institutions. The infrastructure of the majority of school buildings is not adequately secured. As a result, it is nearly hard to find instances of sexual abuse, theft, physical abuse in campuses. By combining real-time cameras with other gadgets, school administration can improve campus security [16].

C. Disability Assistance

Students with mental and physical disabilities need holistic learning method. Customized learning environment is created with the help of IoT. The potential of IoT for students with special needs has been demonstrated by recent study [17-19]. Gloves with sensors and tablet connected device is introduced which can assist a deaf and unspeaking learner in classroom. It is one of the IoT application for disabilities student.

(ii) Application for Teachers

A. Student Attendance monitoring system

An attendance system was developed using RFID (Radio-frequency identification) tags that were incorporated into student ID cards. Using geofencing technology, student entering classroom can be monitored and also it provides specific location for a particular student if required [20]. Every student has an ID card with a bar code to identify them. Biometric attendance systems has introduced which offers an automatic attendance system [21-23].

B. Advanced Pedagogues

The concepts of digital learning, online learning, e-learning, and distance learning are all interchangeable. Teachers in that situation require new pedagogues that facilitate online learning settings. Effective utilization of advanced concepts and pedagogues for teaching and learning enhancement is crucial for educators. One excellent example of a teacher assisting pupils is the flipped classroom [24].

C. Educational Apps

Educational app for teachers leverage the Internet of Things, which is transforming education and can be viewed as a powerful tool. They also allow teachers to present 3D graphics and videos for students.

D. Assessment, evaluation, and feedback system

Student's assignments and feedback can be evaluated using IoT which is an embedded technology. Teachers may quickly and easily acquire assignments data of student performance. A framework for student interactions employing attention scoring assessment in e-learning was proposed by research work provided in [25].

(iii) Application for Students

A. Customized learning

Each and individual student requirement is personalized digital learning environments. Blackboard is a virtual classroom tool that uses an interactive learning management system (LMS) to improve

collaboration and learning. Parents and students are kept informed about the daily school calendar, student grades, events, school news, and attendance by means of these personalized digital learning environments. Additionally, seamless learning is being developed through wearable IoT technologies. Wearable IoT technology can personalize the learning environment for each individual by integrating social media interactions.

B. Global Education

A student might not have the funds to pursue their dream of receiving a scholarship to study overseas. Communication with global student education will be greatly aided by the Internet of Things. From the comfort of their own homes, students will interact with their specific faculty members.

C. Distance Education

When contact learning became impossible during the pandemic, distance learning was developed as a remedy. IoT has the potential to significantly improve online or distance education [26]. According to [27], IoT solutions can improve student performance and efficiency by up to 20% in distance learning. Students can use smart phones to access online portals that contain their test results, homework, and assignments activities. Videos can be saved on the cloud or uploaded to the internet.

D. Enhanced interaction

Students become increasingly interactive through smart phone-based online courses, virtual classes, or e-classes. Students' enthusiasm in various tasks and actively participating in the feedback and assessment procedures is cultivated by this interaction-based learning. As a result, IoT-based learning environments improve student engagement and productivity. For instance, bar code enabled e-books facilitate interactive reading for pupils [28].
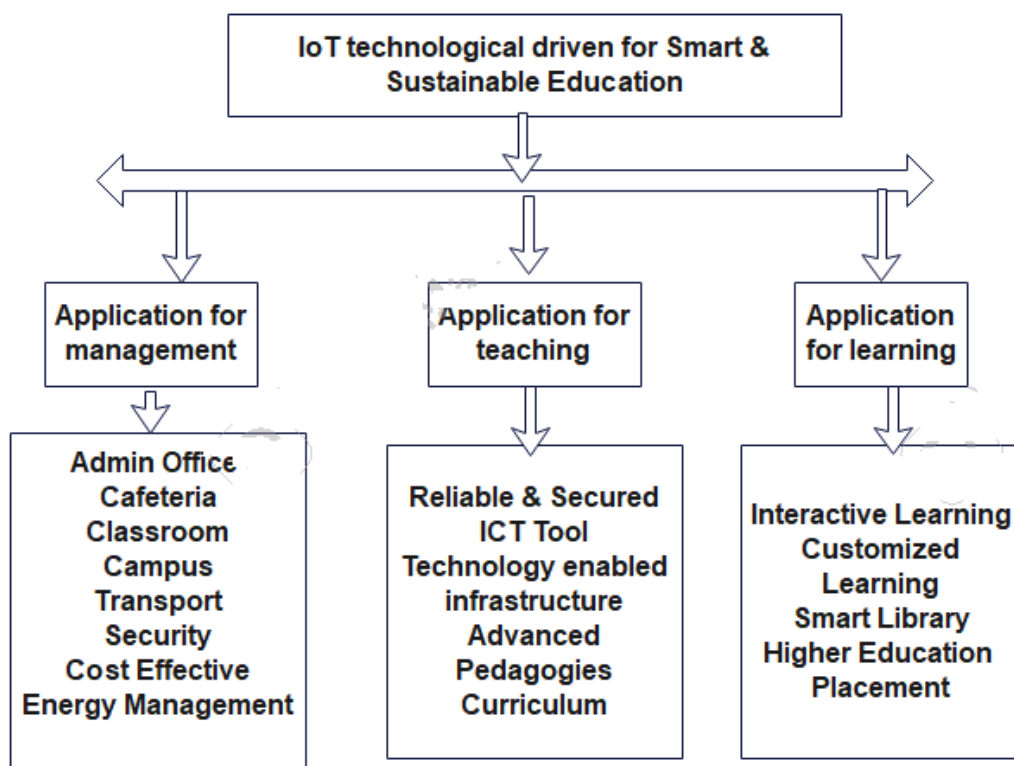
Figure 4: Pictorial representation of IoT system in School

IV. DISCUSSION

A smart school idea powered by ICT and contemporary technology would aid in accomplishing the sustainable development goals set forth by the UN. As seen in figure 5, the country has 17 sustainable development targets [29], by using a IoT technology in education system we are able to achieve three objectives of SDG.   It is possible to accomplish the smart school concept, the quality education objective (Goal 4), the discrimination reduction goal (Goal 10), and the sustainable societies goal (Goal 11) on a larger scale. The main intention of the sustainability is to prepare people to face present challenges, and also to raise the ability of future generations to meet their own needs. Educational progress, enabled by advanced technologies, seems to pave the way to sustainability. We need a quality of education which would make our present better and our future brighter. Therefore, smart schools, enabled with advanced technologies, utilization of information and communication technology, will produce a skilled future workforce and a quality education for sustainable development. Conversely, in order to meet professional demand, US universities and commercial businesses frequently provide IoT courses [30].

Figure 5: UN objectives for sustainable development.

V. CONCLUSIONS

We come to the conclusion that the Internet of Things is a paradigm shifter in enabling sustainable smart schools. We place a strong emphasis on environmentally friendly teaching strategies that support intelligent classrooms. IoT is essential for maximizing educational demands settings. We provided a detailed demonstration of how IoT could be applied to intelligent school administration and for both teaching and learning process. In future research work, our focus is on to improve the safety and security of the Internet of Things, in STEM (Science, Technology, Engineering, and Mathematics) classes in secondary school settings.

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NEW TRENDS AND CHALLENGES IN PHYSICAL EDUCATION AND SPORTS

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Abstract

The aim of this paper is to identify the current trends and challenges in physical education and sports and based on these current challenges, future trends and challenges would be discussed. There are various factors which are diminishing the interest of students in physical education activities. Although the physical education is being taught as a part of curriculum in all the schools but lack of adequate time and trained teachers, good facilities are responsible for little interest in this field. The future challenges to make this field interesting involves an adequate curriculum, sufficient funds allotment for holding various competitions and role of technology to create awareness about the importance of physical activities and sports in our daily life. All these issues have been discussed in the present study.

Keywords: Physical education, sports, curriculum, technology

Introduction

The importance of physical education has never been emphasised more than it is today. It is widely recognised that physical education (PE) and sports is relevant and important in developing an active and healthy lifestyle and the solution to rising obesity rates worldwide. Although in most countries, physical education is part of the school curriculum, lessons are not given, thus leading to a reduced experience of physical activity for children and youth. The practice of a physically active lifestyle in combination with healthy nutrition, however, needs to be started in early childhood. Therefore, ensuring that all children engage in regular physical activity is crucial, and the schools are the only place where all children can be reached. Quality Physical Education is the most effective and inclusive means of providing all children, whatever their ability/disability, sex, age, cultural, race/ethnicity, religious or social background, with the skills, attitudes, values, knowledge and understanding for lifelong participation in physical activity and sport and is the only school subject whose primary focus is on the body, physical activity, physical development and health. The present study will identify the current trends, issues and challenges in PE and sports based on which future challenges will be addressed.

"The aim of Physical Education is to develop physical competence so that all children are able to move efficiently, effectively and safely and understand what they are doing. The outcome, physical literacy, along with numeracy and literacy, is the essential basis for learners to access the whole range of competences and experiences." Linkages to community-based organizations, agencies, and institutions are an essential component of the 21st century health and physical education curriculum (Pate et al., 2006; Sallis, Floyd, et al., 2012). Schools often work with community agencies in all sectors of society— private and commercial, non-governmental and government organizations—to plan and develop programs on a cooperative basis. An important component in developing the joint use of resources is the establishment of a program of communication and interaction. As the joint use of resources implies a sharing of human fiscal and physical resources, it requires that the leaders of cooperating organizations develop close relationships and partnerships among people, agencies, and institutions. A key factor in building cooperative relationships is the importance of leadership that is willing to overcome issues related to territoriality, inertia, legal mandates, tradition, fear of the loss of power, feelings of ownership, the misunderstanding of programs, and others. Such cooperative activities

improve the accessibility to programs and services, as well as areas and facilities. In this way, the talented students will be sponsored through different agencies to take part in different competitions. In India specially where there is so much talent but due to lack of financial funds, many students lacks behind even being so talented. The co-operation from different agencies will help needy students to showcase their talent at different world level competitions. Thus, adequate training through well-defined curriculum as well as funding from different agencies is necessary to promote the PE and sports activities.

Role of technology

Children born in the early part of this millennium are known as the "iGeneration" (Rosen, 2010, 2011). This group of individuals has access to forms of technology unheard of just two decades ago. They have never known life without wireless high-speed internet connections, cellular phones with data connections, texting or video gaming consoles. Most of them are very familiar with technology interfaces, using apps and social media on a regular basis. The implications of such dramatic changes in access to technology among children and youth should be self-evident in all learning areas. Applications in health and physical education pedagogy are available and can be applied to enrich and enhance curricular offerings in most school settings. Numerous technological applications focused on promoting physical activity and fitness are available and easily accessible. However, application of various technologies will require new student and teacher competencies and practices. Students will be required to demonstrate competency in basic motor skills and also competence in using technology. In addition, such technology will enable individuals to learn in a student-centered selfdirected fashion; students will be required to gain greater time management skills in order to enable appropriate time on a task. Teachers will also be required to gain knowledge of contemporary, technology-based instructional strategies. Furthermore, teachers will need to gain a greater awareness of teaching strategies that support anytime, anywhere learning and leverage technological applications. Technology holds promise for the way that students learn and also for the way in which teachers teach. Physical and health educators are challenged to become more responsive to a technology-driven environment that provides enhanced opportunities for learners well beyond the walls of the traditional classroom setting. Technology thus can play vital role in generating the interest in physical education and sports activities.

Conclusion

The current practices and present curriculum needs to be modified to generate interest of students in physical education and sports activities. The future challenges will mainly be the appropriate curriculum to be made and followed and to make available adequate funds from various organisations in order to support the needy but intelligent children so that they can only focus on their game without worrying about the funds. The technology will also play an important role in expanding and creating the interest in physical activities. The importance of physical education and sports activities are being identified in today's world and efforts are being made to improve the situations so that more and more talent can be recognised.

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ROLE OF SOCIAL EMOTIONAL INTELLIGENCE IN STUDENT ACADEMIC SUCCESS

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Social and Emotional Learning (SEL) is crucial for students' academic success, enabling them to develop essential skills such as self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. By incorporating SEL into their education, students experience improved academic performance, better attendance and engagement, increased motivation, enhanced critical thinking and problem-solving, reduced stress and anxiety, and improved relationships with peers and teachers. Effective SEL teaching strategies include explicit instruction, integration with academic subjects, project-based learning, role-playing, mindfulness, and service-learning projects. Assessing SEL involves surveys, observations, performance tasks, and standardized assessments. Despite challenges such as teacher training and resource allocation, best practices like school-wide SEL initiatives, teacher-student relationships, family involvement, and continuous professional development can foster a supportive learning environment. Organizations like Collaborative for Academic, Social, and Emotional Learning (CASEL) and National Association of School Psychologists (NASP) provide valuable resources for implementing effective SEL programs, ultimately leading to improved academic outcomes and lifelong success.

Social and emotional intelligence (SEI) plays a vital role in student academic success. SEI refers to the ability to recognize and understand emotions in oneself and others, and to use this awareness to guide thought and behavior. Effective SEI skills, including self-awareness, self-regulation, motivation, empathy, and social skills, significantly impact academic performance.

Students with high SEI tend to perform better academically, manage time more efficiently, think critically, and solve problems effectively. They also exhibit improved motivation, engagement, and positive relationships with peers and teachers. Moreover, SEI helps students cope with stress, anxiety, and other emotional challenges, leading to better mental health and well-being.

Teachers can foster SEI development by modeling SEI behaviors, creating supportive classroom environments, teaching SEI skills explicitly, encouraging student reflection, providing feedback, and fostering positive relationships. Parents also play a crucial role by promoting emotional awareness, teaching social skills, and encouraging empathy.

Developing SEI skills can be achieved through various strategies, including mindfulness and meditation, emotional intelligence training, social skills groups, role-playing, and service-learning projects. Schools can integrate SEI into their curriculum, providing students with essential life skills.

Despite its importance, SEI development faces challenges, such as time constraints, limited resources, and teacher training. Addressing these challenges requires collaborative efforts from educators, policymakers, and parents.

Research highlights the significance of SEI in academic success, with studies demonstrating improved academic performance, reduced absenteeism, and enhanced mental health. As educators and

policymakers prioritize SEI development, students will benefit from enhanced social, emotional, and academic well-being.

Key benefits of SEI development include improved self-confidence, resilience, relationships, empathy, conflict resolution, decision-making, and reduced anxiety and depression.

Strategies for teaching social-emotional Intelligence (SEI) in different age groups.

Early Childhood (3-5 years)

Teaching social-emotional intelligence in early childhood requires creative and interactive approaches. Storytelling and role-playing are effective strategies to help young children understand and manage emotions. Emotional awareness activities, such as identifying feeling faces, also help develop self-awareness. Social skills groups focus on sharing, taking turns, and cooperation, laying the foundation for future relationships. Teachers model positive behaviors and provide reinforcement to encourage emotional intelligence.

Elementary School (6-10 years)

In elementary school, classroom discussions on feelings and empathy help students develop emotional awareness. Role-playing social scenarios, such as conflict resolution, teaches essential social skills. Teaching self-awareness and self-regulation enables students to manage emotions and behaviors. Encouraging kindness and volunteerism fosters empathy and compassion. Integrating SEI into academic subjects, like literature, enhances learning and promotes emotional intelligence.

Pre-Teen Years (11-13 years)

During pre-teen years, group projects promote teamwork, communication, and problem-solving. Discussions on complex emotions and relationships help students navigate social challenges. Teaching coping strategies, such as stress management, prepares students for adolescence. Encouraging self-reflection and goal-setting fosters self-awareness and motivation. Introducing mindfulness and meditation practices reduces stress and improves focus.

Teenage Years (14-18 years)

In teenage years, debate and discussion forums develop critical thinking and effective communication. Role-playing complex social scenarios prepares students for real-life situations. Teaching conflict resolution and negotiation enables students to manage relationships. Encouraging leadership and community involvement fosters empathy and social responsibility. Exploring identity, self-awareness, and emotional intelligence helps students develop a positive self-image.

Young Adults (19+ years)

For young adults, workshops on emotional intelligence and leadership develop essential life skills. Group discussions on relationships and communication promote healthy relationships. Teaching stress management and resilience prepares young adults for independence. Encouraging self-awareness and personal growth fosters emotional intelligence. Integrating SEI into career development and networking enhances professional success.

Strategies Across Age Groups

Effective strategies across age groups include teacher-student mentorship, parent involvement and education, and school-wide initiatives like restorative justice. Incorporating technology, such as online modules, enhances learning. Ongoing assessment and feedback ensure continuous improvement. Collaborative efforts between educators, policymakers, and parents promote social-emotional intelligence development.

Recommended Resources

Recommended resources include the Collaborative for Academic, Social, and Emotional Learning (CASEL), National Association of School Psychologists (NASP), American Psychological Association (APA), Emotional Intelligence Consortium (EIC), and Social and Emotional Learning (SEL) programs.

Challenges and Considerations

Challenges and considerations include cultural and socioeconomic factors, individual differences and needs, teacher training and support, time constraints, and assessing SEI development and progress.

Conclusion:

In conclusion, social-emotional intelligence (SEI) plays a vital role in students' academic success, mental health, and overall well-being. Effective SEI strategies, such as storytelling, role-playing, and mindfulness, can be tailored to different age groups to foster emotional awareness, self-regulation, and positive relationships. Teachers, parents, and policymakers must prioritize SEI development, integrating it into curriculum and school culture. By acknowledging the importance of SEI and implementing evidence-based practices, we can empower students to navigate complex social situations, build resilience, and thrive in an ever-changing world. Ultimately, investing in SEI development is crucial for cultivating a generation of emotionally intelligent, compassionate, and successful individuals.

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STEAM EDUCATION

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Abstract

In the 21st century, the educational landscape is undergoing significant transformation. Traditional approaches to education are being challenged by new models that emphasize interdisciplinary learning, creative problem-solving, and real-world application. Among these innovative frameworks, STEAM education (Science, Technology, Engineering, Arts, and Mathematics) has emerged as a crucial paradigm for fostering creativity, innovation, and critical thinking among students. STEAM education integrates the five core disciplines, encouraging a holistic approach to learning that not only focuses on technical skills but also fosters artistic and creative expression. This paper explores the concept of STEAM education, its importance, the role of the present education system in shaping and implementing it, and the implications it holds for the future of education. The study highlights how STEAM education addresses the skills gap, promotes collaboration, and prepares students to thrive in an increasingly complex, technological world.

1. Introduction to STEAM Education

STEAM education is an interdisciplinary approach to learning that focuses on integrating the subjects of Science, Technology, Engineering, Arts, and Mathematics. This model encourages students to explore, experiment, and create by connecting these seemingly disparate fields to real-world problems. By incorporating the arts into the traditionally STEM (Science, Technology, Engineering, and Mathematics) framework, STEAM education seeks to develop well-rounded individuals who can think critically and creatively, solve complex problems, and innovate in ways that are both technical and artistic.

The need for a paradigm shift in education is driven by rapid technological advancements and the evolving demands of the workforce. As industries become more integrated with technology, there is a growing emphasis on STEM skills. However, it has become evident that a purely STEM-based education overlooks the importance of creativity, design thinking, and critical reflection—skills that are cultivated through the arts. STEAM education addresses this gap by blending technical expertise with creative expression.

2. The Concept of STEAM Education

STEAM is a concept that encourages collaboration and integration among the five core disciplines: Science, Technology, Engineering, Arts, and Mathematics. It is not about teaching these subjects in isolation but about breaking down the silos and fostering an interdisciplinary approach. The integration of the arts into STEM subjects is particularly significant. While STEM disciplines focus on technical skills and quantitative analysis, the arts (including visual arts, performing arts, design, and humanities) provide opportunities for creativity, communication, and expression, which are essential for solving real-world problems.

In a STEAM-driven curriculum, students are encouraged to engage with all five disciplines simultaneously. For instance, students might design and build a prototype that solves an environmental issue, using scientific principles, mathematical calculations, engineering design, and artistic creativity to make the solution both functional and aesthetically pleasing. This not only makes learning more engaging but also enables students to understand the real-world applications of their studies.

3. The Role of the Present Education System

The current education system, in many parts of the world, is still based on traditional models that emphasize rote learning and compartmentalized subjects. In such systems, science, technology, engineering, mathematics, and the arts are taught as isolated disciplines, often with limited integration. This can lead to fragmented learning experiences that fail to mirror the interconnected nature of the modern world.

However, there are increasing efforts to incorporate more interdisciplinary teaching and project-based learning. Many schools and universities are beginning to implement STEM and, more recently, STEAM curricula in response to the growing recognition of the need for holistic education. The role of the present education system, therefore, is critical in transitioning toward STEAM education. Educators are required to adapt their teaching methods to include cross-disciplinary learning, project-based tasks, and problem-solving activities. This shift involves rethinking how subjects are taught, how students interact with learning material, and how assessments are conducted.

Moreover, the current education system also needs to address the skill gaps that exist in the workforce. Employers across industries are increasingly looking for employees who possess a combination of technical knowledge and creative problem-solving abilities. STEAM education bridges this gap by preparing students with the skills needed to excel in the modern job market.

4. Educational Implications of STEAM Education

The adoption of STEAM education has far-reaching implications for both students and the broader education system. Some of the key educational implications include:

4.1. Development of Critical and Creative Thinking

One of the most significant benefits of STEAM education is its focus on developing both critical and creative thinking. By incorporating the arts, students are encouraged to approach problems from multiple perspectives. The integration of artistic design into scientific inquiry helps students think outside the box and come up with innovative solutions. This fosters an environment where students are not just learning facts and figures, but also developing the ability to analyze problems, think creatively, and devise solutions that are both functional and aesthetically pleasing.

4.2. Collaboration and Teamwork

STEAM education emphasizes collaboration, both within and outside the classroom. Many STEAM activities involve group projects where students with different strengths and skill sets work together to solve a problem. For example, in a team of students tasked with designing a sustainable product, one student may focus on the engineering aspect, another on the technological tools needed, while another may work on the artistic design. This collaborative approach helps students develop essential teamwork skills, communication, and adaptability.

4.3. Bridging the Gap Between Disciplines

Traditionally, the disciplines of STEM and the arts were taught separately, which made it difficult for students to see the connections between them. STEAM education bridges this gap by showing how these subjects are interrelated and how they can be applied together to solve complex problems. This integration helps students develop a more comprehensive understanding of how the world works and how to approach problems holistically.

4.4. Preparation for Future Careers

The job market of the future demands individuals with a wide range of skills, including technical, creative, and interpersonal abilities. Many of the jobs that will exist in the next few decades have not even been created yet, and they will likely require a combination of knowledge from different

fields. STEAM education prepares students for these unknown careers by encouraging a flexible, interdisciplinary approach to learning. Moreover, industries such as technology, design, manufacturing, healthcare, and entertainment are increasingly seeking professionals who can work across multiple disciplines. By providing students with a diverse skill set, STEAM education helps them become more adaptable and better equipped for the challenges of the future workforce.

4.5. Student Engagement and Motivation

The integration of hands-on, project-based learning within STEAM education increases student engagement and motivation. When students work on real-world projects that integrate the disciplines, they see the immediate relevance of what they are learning. This makes learning more meaningful and enjoyable, as students can directly apply their knowledge to solve tangible problems. The creative aspects of STEAM, such as designing a product, performing an experiment, or producing a piece of artwork, also appeal to students' imaginations and help maintain their interest in learning.

4.6. Global Competitiveness

As economies become more globalized, the ability to innovate and compete on the world stage is increasingly important. Countries that invest in STEAM education create a workforce that is better prepared for the demands of a technology-driven, creative, and interconnected world. By fostering creativity, innovation, and problem-solving skills, STEAM education helps to ensure that future generations are ready to face global challenges and seize emerging opportunities.

4.7. Inclusivity and Equity

STEAM education can also have positive implications for inclusivity and equity. By offering students the opportunity to engage with a wide range of disciplines, it provides an equal platform for those who may not excel in traditional academic subjects like mathematics or science. The inclusion of the arts allows for greater flexibility in engaging students with different interests and strengths. Additionally, project-based learning often encourages students from diverse backgrounds to collaborate and learn from each other, promoting a more inclusive educational environment.

5. Challenges and Future Directions

While the potential benefits of STEAM education are clear, there are several challenges that need to be addressed for its widespread implementation:

1. **Teacher Training:** Many educators are still trained in traditional subject-specific approaches, and integrating multiple disciplines requires new methods of teaching and assessment. Professional development and training are essential for ensuring that teachers are prepared to implement STEAM education effectively.

2. **Curriculum Development:** Designing curricula that effectively integrate STEAM subjects is a complex task. Educators must collaborate to create interdisciplinary curricula that align with state or national standards while also promoting creative exploration.

3. **Resource Allocation:** STEAM education often requires access to specialized resources such as technology, lab equipment, and art materials. Schools, particularly those in underfunded districts, may struggle to provide these resources, limiting the effectiveness of STEAM initiatives.

4. **Cultural Shifts:** There is also a cultural shift required in schools, as educators, administrators, and parents need to recognize the importance of integrating the arts into the STEM framework. This requires a shift in mindset, particularly in countries where STEM education is prioritized over the arts.

6. Conclusion

STEAM education represents a progressive, holistic approach to learning that has the potential to transform education systems worldwide. By integrating science, technology, engineering, arts, and mathematics, it fosters critical thinking, creativity, and collaboration, preparing students for the challenges and opportunities of the future. While there are challenges in implementing STEAM education, the long-term benefits, including a more innovative workforce, increased student engagement, and global competitiveness, make it a powerful tool for shaping the future of education. Moving forward, it is essential that education systems continue to embrace and develop STEAM principles to ensure that students are equipped with the skills they need to thrive in an increasingly complex and interconnected world.

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NATIONAL EDUCATION POLICY 2020 IN INDIA AND CHALLENGES FOR LEARNING TO LIVE TOGETHER

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Abstract

The rapidly changing social dimensions in the last century compelled UNESCO authorities to address the changing educational needs. Accordingly the international commission on education for 21st century was formed in 1996 and professor Jacques Delos was the chairperson of the commission. The commission identified four pillars of education for the 21st century. The first pillar is Learning to know, the second to Do, the third learning to Live Together, and the fourth learning to Be. All the four pillars have been aptly identified taking in to the account the fundamental principles of civilization on the one hand and technological advancements on the other. The pillars attend to synchronize basic human needs with the technology by insisting humanization of the technology. There are many more implications which need waders address. The present paper attends to address sum of the implication in the context of the third pillar Learning to live Together in the context of implementation of NEP in India.

Introduction

The 20 century has been the century memorable for many good as well as dreadful historical events across the globe. The most important field of development in the 20th century was technology. Discovery of telephone 1876 followed by discovery of motion pictures 1895 discovery of aero plane 1903- 1907 development of advanced computers 1930 till date discovery of internet 1971 and discovery for mobile for 1973 have become most useful technology girl innovation for human beings. On the other hand First World War and Second World War have reminded me most devastative events in which history of the world till date.

Whatever happens in the world around the common people get affected on influenced lonely but progressively for all civilization are interconnected with the network of human emotions certain archetypal emotion which have been named human universal sometimes human beings are able to biggest and adapt the changes and sometimes they find it difficult to cope up with them. They learn to adjust if the change in inevitable and useful. The protest when the change in optional and useless or less useful. The Indian society today is stirred by the feeling of non secular state with the rise in rule. This non- secularism is a myth or reality is an optional question for me but if the intelligent interpret state has non secular heat cannot be ignored. The situation complaints me to speak about the third pillar identified by the international commission on educational for 20 first century for devising and implementing policies in the field of education.

The international commission on education for 21st century shared by Jacques Delos was formed by UNESCO in 1996. In the report submitted in 1999, the commission identified four pillars of education. The first pillar Learning to know, emphasize the traditional truth that acquiring knowledge that is a never- ending process. One learns not only through books but I also throw experience. One experience leads to another which leads to the next and that to the next. This includes the they development of the faculties of the memory, imagination, and reasoning, abilities to think in a coherent and critical way. This also implies learning of of the not only the codified information items prescribed in the syllabus but mastering the instruments of knowledge.

The second pillar is Learning to Do, means application. Education systems all over the world have been missing this fundamental principle. Students know the content they learn over a period of time but they

do not know why they have learnt it or what to do with their learning except their attempts at getting jobs using acquired educational qualification. Learning to Do, also means time skills which have application in the real life. Sum of the skills are intellectual and some of the skills are behavioral.

The first imply implication of the third pillar learning to live together, is need and acceptance of existence of their being. With the technological advancement the world has got converted into a village. People of different races, and religions are living together to form multicultural society. Yet there are certain principles which we need to learn and follow in our lives.

The fourth pillars Learning to Be, takes it origin from the aim of development of the complete fulfillment of man. Should possess different personality traits to fulfill his personal, familial societal needs of expressions behavior in representation. Learning to Be, basically means learning to be a human being and animal different from other animal show due to his capacities of memory and logical thinking.

Learning to Live Together:

Learning to live together is given from emphasis than any other pillar by commission. Eat refers to a students development of understanding and the art of understanding of other people. Seniors to develop basic social etiquettes like respect for individual ability to empathize, and openness to appreciate works and efforts of others. It is possible to understand respect and independence in the social life. Sharing of purpose for fulfillment of different aims in life for a shared future.

Aspect of Curriculum for Learning to Live Together:

If life is a network it include subjective objective and interpersonal factors affect the quality of education dispensed by teachers and received by students. It is bound have some harnessing and you harmful elements in its how your if learning to live together is a fundamental principle of education.

1) To enhance participation of learners.

2) To strengthen coordination between members of the group.

3) To augment coherence between aims of the group and action taken to achieve m.

4) To explore potential of individual to act affirmatively.

5) To create awareness among themselves of their social existence.

6) To create awareness of social dynamics among the learners.

The whole process of education in the light of above discussion, entails preparation for affirmative action that suspends discrimination.

On any of the basis of the traditional basis such as race, caste ,region, religion, or physical and intellectual capacities.

Issues at stake in the Indian society:

1) Generation Gap:

World has left its agrarian phase far behind. The modern societies are technological. Even farmers throughout the world are making use of modern technological means for increasing their form production. One of the essential characteristic of the contemporary society is development of economy based on service provided. Service sector are the sectors concentrated mostly in the cities causing migration to a large extinct. Technology advancement in the last two decades are so rapid that the technology mustard today's becomes outdated within span of five years.

2) Multicultural society:

Increased literacy increased job explanations of the people. The prefer to work in the world where there is guaranteed income to farming fair in come is not guaranteed and preparation with physical work they have to undertake. This is given rise to increasing migration from pleasures to nearby distant cities. Almost all the city in India is getting over crowded. People form different reason, religion and social

background shift to new location and adjust themselves among people whom they do not know. Migration does not necessarily change the mind set of people nor does it allow them to get detached from their original culture setup. The carry the necessary elements of their culture to the new place and try to maintain them. How your they say attachment cannot be discovered among their next generation for this generation grows up becoming part and parcel of the new mixed culture even setting place around them.

3) caste system and Rising Communal Polarization:

Indian people are divided by into caste which are based on the traditional works assigned to them. Dr. B .R. Ambedkar and people who believed in the eradication of the caste from India, under took deliberate efforts to elevate the status of lower caste by making some constitutional provisions. It has been successful to the large extent. However the causes of atrocity are increasing day by day. It implies that the caste system, which seems eradicated apparently, is not eradicated to the roots. For a few people who have lost their job opportunities and power position due to reservation for lower caste are developing in extreme determines against them.

4) Techno –Savvy Society

The Indian society observes rapid increase in the number of mobile phone and internet users. These means of communication have enabled people to communicate with people from even and remote areas instantly. Access to the technology have helped a people in the multiple ways, they can find whatever information they want on the internet and other means of communication have simplified complex procedure in market farmers know about the weather in advance and can plan their farm activities and so on. However the same technology has a led to many cyber crime, sharing of personal and confidential information on the social media electronic fund and so on.

It is here that the need to educate people about misuse of these technological tools for the welfare of individual rather than snagging them. This is one more issues to be ad dressed in the context of Indian education system.

Conclusion:

There are many other issues to be a dressed properly we want to develop a society that practices peace, order and harmony. However it is convenient to think about certain issues which are of prime importance. Surely de good help us think about a framework that enables us to implement the third pillar of the international commission or education for the 21st century.

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THEME 6

THEME - 6

THE IMPORTANCE OF PHYSICAL EDUCATION AND ITS EFFECT ON ACADEMIC PERFORMANCE

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Abstract

Health is a vital moderating factor in a child's ability to learn. The idea that healthy children learn better is empirically supported and well accepted (Basch, 2010). Many factors influence the academic performance of a child. In adults, brain health, representing absence of disease and optimal structure and function, is measured in terms of quality of life and effective functioning of activities in daily living. In children, brain health is measured in terms of successful development of attention, on-task behavior, memory and academic performance in an educational setting. Physical activity and fitness plays a vital role in developing the brain during childhood. Children respond faster and with greater accuracy to a variety of cognitive tasks after participating in a session of physical activity. Participating in moderate physical activity is found to increase neural and behavioral concomitants associated with the allocation of attention to a specific cognitive task. In some experimental study, children who participated in 30 minutes of aerobic physical activity outperformed those children who watched television for the same amount of time. Physical activity which is generally used as a break from academic learning time, post engagement effects of it includes better attention, increased on-task behaviours and improved academic performance.

Keywords: Physical activity, Brain Health, Academic performance, Sports, Psychology

Introduction

The popular adage 'health is wealth' throws light on the need to maintain good health for the overall wellbeing of individuals and societies. 'All work and no play makes Jack a dull boy' is an oft quoted proverb. Here, the emphasis is actually on the need to do regular physical exercise. Our perception of health is so ill-conceived that we tend to go for healthy foods instead of following a strict exercise regimen and good eating habits. No wonder, several people turn obese in their mid-twenties! 'A sound mind in a sound body' is the English translation of a Latin proverb quoted in academic circles everywhere. Our forefathers were ever mindful of the attributes of good health and were practitioners of regular physical activities. It is, therefore, very apt to go deep into the attitude of college students towards physical activity in general. Sports can be used to work towards a number of developmental goals in humans that ensure their total well-being. Sport improves public health, promotes academic activities, enhances social development and above all supports community life.

Review of Literature

Zeng & Raymond (2011) investigated the attitudes of high school students toward physical education and their sport activity preferences. The investigators were of the opinion that identifying and understanding correlates of school children's physical education activity participation are critical to promoting current and lifelong physical activity participation of children. Among other factors, children's attitudes are considered to be a key element influencing physical activity participation. Children who have more positive attitudes toward physical activity are reported to be more likely to participate in physical activity outside of school and demonstrate higher physical activity amounts than those with less positive attitudes. Fostering children's positive attitudes toward physical activity would be conducive to the promotion of current and lifelong physical activity participation of children. Broman (2005) refers to recent studies which indicate that college students experience distinctive

stressors and this stress is linked to substance abuse, lower self-esteem, academic problems, depression, and many other ailments. In addition, during college days, a shift occurs from parental supervision to a more independent life style. Students always find problems with time management, work issues, as well as learning to cope with a variety of social role changes as new friendships and relationships are developed. For many, new challenges arise as they have their first opportunity to develop their own daytime patterns and sleep schedules. In addition, new financial changes as well as pressure for academic success occur. These unique stressors have been associated with anxiety and may ultimately have a negative impact on a students' learning ability.

Onifade (1985) states that, given the many benefits of vigorous physical activity and the resultant improvement in the general health of the people it is imperative that early intervention on the part of the authorities is ensured. Fitness programmes need to be designed keeping in mind the requirements of individual trainees. The general physical activity recommended to enhance physical fitness is 30 minutes of moderate-intensity physical activity on a daily basis. The physiological benefits of physical activity and fitness exercise are very important since they enhance energy, strength, endurance, bone mass and the ability to participate in sports.

Objectives of the study

1. To understand the importance of physical education for school children.
2. To ascertain the relationship between physical fitness and its impact on academic performance of children.
3. To suggest measures to further strengthen the concept of including physical education as a part of curriculum at school level itself.

Research Methodology:

Type of research: It is a descriptive study in nature.

Sample size: 400 respondents.

Respondents: School children studying in various schools across Shivamogga.

Type of Data: Primary data has been collected using well designed questionnaire, direct personal interview and observation methods. Secondary data has been collected by referring to articles and research papers published in various national and international journals, magazines, reports etc.,

Analysis: Such collected data was tested using SPSS software, Analysis of Variance was performed to understand the co-relationship between the dependent and independent variables.

Findings of the study:

- Physical activity has a positive impact on cognitive skills such as concentration and attention and it also enhances classroom attitudes and behaviours, all of which are important components of improved academic performance.
- The more physically fit children were not only better at reading, they were also better at reading passages with several grammatical errors. The researchers looked at the brainwave patterns that deal with language and the ability to spot errors in grammar. The fit children had strong results with both brain wave groups and a better understanding of nonsensical or error-filled sentences.
- Study also found positive associations between physical activity, fitness, cognitive function and academic achievement. The evidence indicated that physical activity has a relationship to parts of the brain that support complex cognitive processes during laboratory tasks. It also showed that physical activity is important for growth, development and general health.
- Just one session of moderate physical activity instantly boosts kids' brain function, cognition

and academic performance.

- Mastering fundamental movement skills boosts brainpower and academic performance. Time away from lessons in favor of physical activity doesn't come at the cost of good grades.
- Research proves that students need adequate amounts of physical activity throughout the school day not only does it prevent obesity and obesity-related issues, but students also perform better academically

Suggestions:

- Study also found positive associations between physical activity, fitness, cognitive function and academic achievement. The evidence indicated that physical activity has a relationship to parts of the brain that support complex cognitive processes during laboratory tasks. It also showed that physical activity is important for growth, development and general health.

• Just one session of moderate physical activity instantly boosts kids' brain function, cognition and academic performance.

• Mastering fundamental movement skills boosts brainpower and academic performance. Time away from lessons in favour of physical activity doesn't come at the cost of good grades.

• Research proves that students need adequate amounts of physical activity throughout the school day not only does it prevent obesity and obesity-related issues, but students also perform better academically

Conclusion

Students should engage in additional vigorous or moderate-intensity physical activity throughout the school day through recess, dedicated classroom physical activity time and other opportunities. Since, physical activity promotes health and learning, it follows that physical activity should be a priority for all schools, particularly if there is an opportunity to improve academic achievement. Schools are being underutilized in the ways in which they provide opportunities for physical activity for children and adolescents. Therefore, a whole-of-school approach to increase physical activity for children and adolescents is needed. Under such an approach, all of a school's components and resources operate in a coordinated and dynamic manner to provide access, encouragement and programs that enable all students to engage in vigorous-or moderate-intensity physical activity 60 minutes or more each day

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MARKETING OF DIGITAL LIBRARY PRODUCTS AND SERVICES AND ITS CHALLENGES TO PROFESSIONALS

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INTRODUCTION

1. Background of the study:

Academic libraries are currently experiencing changes in the new information age, due to rapidly changing media technologies, increasing users' preferences and expectations, competition from other information providers such as the internet, and dwindling library budgets. These necessitate library and information science professionals leveraging competitive marketing approaches to strategically reorient themselves and libraries as information superhighways that individuals can not do without.

Marketing is considered one aspect of the competencies needed and is critical among library and information science professionals. Osinulu, Adekunmisi and Okewale (2017) stress that librarians should be competent in all aspects of librarianship, which includes basic foundational knowledge in librarianship, readers' services, information and communication technologies (ICTs) handling and use, reference services, etcetera, before library professionals can adequately and effectively market library services and information. Products, librarians must be knowledgeable, skilled and must possess good attributes or disposition in these core aspects of librarianship. Marketing is basic and is considered to be essential in the management process for promoting information products and services. Marketing knowledge can assist libraries to have a competitive advantage over competitors and it is through development of new services or changes in the existing ones that they can achieve this and satisfy users better. In other words, marketing competency can bring about improvement in organizational status and enhance the image of librarians, thereby improving library performance.

Unfortunately, many studies have documented librarians' lack of professional understanding of the marketing concept and its applicability to librarianship. Most library executives believe that marketing is only applicable and relevant to for-profit organizations. Most librarians do not promote library resources, services and products effectively due to a lack of training and poor knowledge of marketing tools and techniques, as well as the fear of commercial publicity. Some librarians see marketing as manipulative, unprofessional, a waste of time and resources.

Similarly, Adekunmisi (2017) indicated a lack of business expertise among academic librarians and he pointed out a lack of interest in the idea and concept of marketing mix among librarians and library top management as a challenge in marketing of products. These scenarios can be attributed to deficiencies in the marketing concepts and principles in the library school curricula. These factors also contribute to low patronage and under utilization of library information resources, products and services. Librarians, as information professionals, need adequate knowledge, skills and attributes of marketing principles and a clear understanding and appreciation of the relevance of marketing to librarianship. Librarians must be involved in marketing and must use marketing principles and strategies to convince and attract users to the library collections and services they offer. A key responsibility of

academic libraries is to provide timely access to information resources, both print and non-print, that meet the curriculum and programme needs of students and teaching staff.

2. Statement of the problem:

In spite of the benefits derived from the use of social media tools in promoting the marketing of library and information resources and services, there are a lot of challenges hindering the promotion and marketing of library resources and services. The concept of a library without "walls" is catching up and is becoming popular among patrons. In this information-centric user community, libraries are expected to provide online access to information in a 24/7 mode as they are used more in an online environment. Users visit libraries to use computers and internet facilities, to access e-contents in a comfortable ambiance, and to use library space for reading and group discussion. Furthermore, when compared to the previous century, the use of physical collections is reduced because information is available and accessible via the internet from anywhere. However, the major problems in marketing library and information products and services are a lack of time to use social media, a lack of privacy and identity theft, too many social media tools to learn, a lack of knowledge of how to use social media tools, the slow speed of the internet, insufficient funding for libraries, a lack of qualified staff, and insufficient training opportunities. Thus, a high level of ease of access to resources and services in the preferred format, highly skilled library personnel, ease of location, a high level of access to ICT applications, resources, and services, and fascinating library equipment and facilities are required for the library to maintain a competitive advantage. More so, librarians must identify public presentation, direct marketing, advocacy, bulletins, newsletters, readers' awareness training, display strategy, library web pages, lectures, library tours and use of web tools as strategies for promoting library information products and services. As a result, this study seeks to investigate the marketing of library products and services, as well as the challenges that this presents for professionals.

3. Objective of the study:

The main focus of this study seeks to examine the marketing of library products and services and its challenges for professionals. Specifically, the study will be:

1. To determine if there is a need for marketing library services in academic libraries in Rivers state.
2. To investigate the obstacles that prevents librarians from effectively marketing library services.
3. To offer strategies to enhance the effective marketing of library services.

4. Significance of the study:

The study will be relevant to academic institutions, administrators, library committees, librarians, users and researchers. In specific terms, the findings will be significant to academic institutions' administration in the area of policy formulation by providing a road map for curbing the challenges that hinder the effective marketing of library products. It is hoped that it will create awareness for the library committee as regards the strategies to enhance the effective marketing of library services to users. This work will also educate librarians on how to effectively and efficiently market library products and services. It will also assist them in identifying their lapses and hence improving their services by attracting, satisfying, and retaining users in the library. The findings will also be useful to users by creating awareness of the various services available in the library. Users will get an improvement in the services offered as a result of the recommendations of this study. The research will also contribute to the existing body of knowledge about marketing library services and build on the knowledge of the problems in academic libraries in Nigeria. More so, the result of the study will add to the body of

knowledge and serve as a reference material for other researchers who wish to undergo research in a related field.

5 Scope of the Study:

The scope of this study borders on marketing of library products and services and its challenges to professionals. The study is however delimited to University Libraries in Rivers State.

6. Limitation of the Study

Financial constraint: Insufficient fund tends to impede the efficiency of the researcher in sourcing for the relevant materials, literature or information and in the process of data collection (internet, questionnaire and interview)

Time constraint: The researcher will simultaneously engage in this study with other academic work. This consequently will cut down on the time devoted for the research work.

7. Definition of terms

Librarian: A librarian categorizes, prepares, and catalogs these materials. Librarians also recommend material and help individuals find the information that they need. They analyze and organize collections by subject. They educate individuals on how to use the library systems to find the information they need.

Product: In marketing, a product is an object or system made available for consumer use; it is anything that can be offered to a market to satisfy the desire or need of a customer

Marketing: In marketing, a product is an object or system made available for consumer use; it is anything that can be offered to a market to satisfy the desire or need of a customer

Marketing in Library: marketing in library and information services is the process of planning, pricing, promoting and distributing library products to create exchanges that satisfy the library and the customers or users.

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BUILDING FUTURE-READY MINDS: KEY SKILLS AND COMPETENCIES FOR 21ST-CENTURY EDUCATION

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Abstract

The educational landscape is evolving to meet the needs of future learners and workers in a world shaped by rapid technological advancement, globalization, and societal shifts. Influential figures like Dr. A.P.J. Abdul Kalam and Dr. K. Kasturirangan have advocated for a holistic, future-oriented approach to education. The shift from traditional to modern practices reflects the changing demands of industries, focusing on flexibility, lifelong learning, and human-centered skills.

Key competencies for 21st-century education include digital literacy, technological competence, critical thinking, and problem-solving, enabling students to thrive in a tech-driven world and address complex challenges. Social and emotional learning (SEL) promotes emotional intelligence and personal development, while adaptability and resilience equip learners for dynamic environments. STEM skills are essential for innovation, and lifelong learning fosters continuous growth. Emphasizing mental health ensures balanced development, and research and innovation drive personalized learning, helping bridge educational disparities.

In conclusion, education in the 21st century must extend beyond academics, preparing students with diverse skills to navigate an uncertain, evolving world, and empowering them to contribute meaningfully to society.

Keywords: Future Skill, Competencies, Digital literacy, Critical thinking, SEL and STEM competencies.

Introduction:

Future educators will need to possess knowledge and abilities that keep up with the quick changes in society, technology, and the economy. Learners will need to acquire both technical expertise and human-centered skills to survive in ever-evolving contexts as automation, artificial intelligence (AI), and globalisation continue to impact fields.

Throughout his life and career, Dr. A.P.J. Abdul Kalam, the esteemed scientist and former President of India, has underscored the need of education for future skills and competences. His conception of education was based on the idea that today's kids will be tomorrow's leaders and that they need to be prepared with the knowledge and morals needed to create a prosperous and peaceful world.

The shift in educational approaches from conventional to contemporary ones is a reflection of the shifting needs of employers and society. The competences and skills needed for success have changed as the world grows more technologically connected and integrated.

The National Education Policy (NEP) 2020 committee chaired by renowned Indian space scientist Dr. K. Kasturirangan has been instrumental in defining the country's future educational abilities and competencies. His observations, which are mirrored in the NEP 2020 in particular, highlight the necessity of an all-encompassing, interdisciplinary, and skill-oriented educational framework in order to adequately prepare students for the opportunities and difficulties of the twenty-first century.

As 2024 draws to a close, the educational landscape is still changing quickly to keep up with the needs of a technologically advanced, complicated, and linked society. Future-orientated skills and competencies that are needed in education are becoming more and more focused on preparing students for careers that will require flexibility, lifelong learning, and a wide range of talents in addition to today's occupations.

The following are some essential skills and competencies that will probably be necessary in the future of education:

1. Development of Digital Literacy and Technological Competence:

The importance of digital literacy and technological competence in education is growing as technology permeates every aspect of daily life and learning. It describes the capacity to use digital tools, resources, and platforms for socialising, working, and learning in an efficient and responsible manner. When it comes to education, digital literacy and technological competence gives teachers and students the ability to access, assess, produce, and share knowledge in a digital setting.

Importance of Digital Literacy and Technological Competence in Education:

a. Improving Learning: Students that possess digital literacy are able to participate in interactive, self-directed learning and have access to a multitude of educational resources.

b. Workplace Readiness: Digital literacy is crucial for future employment as more industries use digital technologies.

c. Global Competence: Students who are digitally literate have greater access to global communities and resources, which promotes a more in-depth comprehension of various cultures and global concerns.

d. Critical Thinking: It helps pupils distinguish between accurate and false information by encouraging critical assessment of the material.

e. Lifelong Learning: Digital literacy is essential for adjusting to new tools and platforms in a world where technology is always changing.

2. Critical Thinking and Problem-Solving:

Problem-solving and critical thinking are essential educational abilities that support students in assessing various viewpoints, analysing data, and coming up with solutions for challenging problems. These abilities are essential for developing deeper learning, encouraging autonomous thought, and preparing children for obstacles they may face in the real world.

Dr. Kasturirangan believes in fostering an inquiry-based approach to education, where students are encouraged to ask questions, explore, and engage in problem-solving. This method helps students develop critical thinking skills, which are essential for navigating complex challenges in the future.

Importance of Critical Thinking and Problem-Solving in Education:

a. Preparation for Complex Real-World Problems
b. Fostering Independent Learning
c. Enhancing Creativity and Innovation
d. Informed Decision-Making
e. Collaboration and Teamwork

3. Social and Emotional Learning (SEL):

In education, social and emotional learning (SEL) aims to provide students the emotional intelligence, social skills, and self-awareness they need to control their emotions, form wholesome relationships, and make moral decisions. Students' general well-being, academic achievement, and capacity to negotiate the challenges of both the classroom and the outside world all depend on SEL.

Dr. Kasturirangan sees education as encompassing students' social and emotional growth in addition to academic success. Since these abilities are essential for both personal and professional success, he thinks that education should foster empathy, resilience, communication skills, and emotional intelligence.

Importance of SEL in Education:

a. Improves Academic Performance
b. Promotes Mental Health and Well-Being

    c. Enhances School Climate

    d. Prepares Students for Life Beyond School: SEL equips students with life skills such as teamwork, leadership, and conflict resolution, which are essential for personal and professional success.

    e. Fosters Equity and Inclusion

4. Adaptability and Resilience:

Resilience and adaptability are critical educational competencies that equip pupils to deal with the uncertainties and difficulties of a world that is changing quickly. Being adaptive and resilient enables students to flourish not only in the classroom but also in their future personal and professional life as they navigate the demands of academics, changing technologies, and social dynamics.

Importance of Adaptability and Resilience in Education:

    a. Navigating Change and Uncertainty: The modern world is characterized by rapid technological advancements, shifting job markets, and global challenges like pandemics and climate change. Adaptability equips students to thrive in uncertain environments. Resilience helps students recover from challenges like changes in their personal lives, societal upheavals, or academic struggles, ensuring they maintain their well-being and progress.

    b. Promoting Lifelong Learning

    c. Fostering Emotional and Mental Health

    d. Building Social and Emotional Competencies

    e. Preparing for Future Careers

5. STEM Competencies:

The information, abilities, and attitudes required for students to succeed in the fields of science, technology, engineering, and mathematics (STEM) are included in the category of competencies in education. In the current global economy, these competences are becoming more and more crucial because a lot of future occupations will need solid backgrounds in these fields. In addition to preparing students for particular careers in technology and engineering, STEM education promotes innovation, critical thinking, and problem-solving—skills that are useful in a variety of fields.

Importance of STEM Competencies in Education:

    a. The demand for STEM professionals continues to grow across industries such as healthcare, information technology, finance, and engineering. By developing STEM competencies, students are better prepared for high-demand, high-paying careers in these fields.

    b. STEM drives innovation in areas such as renewable energy, biotechnology, and manufacturing, which are key to solving global challenges like climate change, healthcare access, and food security. Educating students in STEM fosters the development of new technologies and solutions that spur economic growth.

    c. STEM competencies are not limited to traditional STEM careers. Skills like data analysis, problem-solving, and technological proficiency are increasingly valuable in fields such as marketing, business, education, and the arts, allowing students to apply STEM knowledge across disciplines.

6. Lifelong Learning:

Education institutions are pushing the idea that learning never ends—a concept that has gained prominence in recent years. Creating a mindset that emphasises ongoing professional and personal development is emphasised. Dr. Kalam recognized the importance of lifelong learning in an ever-

changing world. He encouraged students and professionals to continuously update their knowledge and skills to stay relevant in their fields.

One aspect of Dr. Kasturirangan's mission for the students is to encourage a love of lifelong learning. According to him, learning should pique people's curiosity and motivate them to keep learning and developing so they can adjust to changing situations throughout their lives.

Importance of Lifelong Learning in Education:

    a.   Flexibility in a Changing Environment: The benefits of lifelong learning gives students the attitude and resources they need to continuously improving their knowledge and abilities throughout their life. This keeps them current in both their personal and professional life.

    b.   Professional Achievement and Employment Mobility

    c.   Personal Growth and Fulfilment

    d.   Social and Civic Engagement

    e.   Mental Health and Cognitive Well-Being

7. Mental Health and Well-Being:

More and more people are realising that kids' academic performance, personal growth, and general quality of life are all dependent on their mental health and well-being in the classroom. Creating supportive settings, attending to social and emotional needs, and offering resources for both prevention and intervention are all important components of a comprehensive strategy for mental health and well-being in schools.

Importance of Mental Health and Well-Being in Education:

    a.   Supporting mental health enhances students' ability to learn, participate in class, and achieve academic success. When mental well-being is prioritized, students are more likely to meet their educational goals and perform better academically.

    b.   By promoting mental health and well-being, schools help students develop essential life skills such as emotional regulation, self-awareness, and social interaction, which are critical for personal and professional success.

    c.   Early intervention in schools can reduce the risk of long-term mental health problems and equip students with coping strategies to manage stress, anxiety, and other challenges later in life.

    d.   A positive school climate where mental health is valued promotes a sense of belonging, safety, and mutual respect.

8. Research and Innovation:

Research and Innovation involve applying new methods, technologies, and ideas to improve educational systems, outcomes, and access. By fostering an environment that encourages continuous inquiry and experimentation, educators and policymakers can address evolving challenges and meet the diverse needs of learners in the 21st century.

Importance of Research and Innovation in Education:

    a.   Improving Educational Outcomes

    b.   Every student learns differently, and one-size-fits-all teaching methods are often ineffective. Innovation in education allows for the development of personalized learning experiences tailored to individual needs, learning styles, and abilities.

    c.   Educational disparities exist across socioeconomic, geographic, and demographic lines. Research and innovation can identify strategies to close these gaps, ensuring that all students have access to quality education regardless of background.

d. Research-backed programs can help teachers improve their instructional strategies, classroom management, and ability to support diverse learners. Innovations such as virtual professional development platforms provide flexibility and access to resources.

e. Traditional assessments often focus on memorization rather than deeper learning. Research informs innovative assessment methods that measure student understanding, creativity, collaboration, and problem-solving.

Conclusion:

The goal of education in the twenty-first century is to cultivate a wide range of competences and skills that go beyond conventional academic knowledge. The goal is to produce robust, flexible, and diverse people who can prosper in a world that is changing quickly. Education systems must provide students with the skills they need to not just navigate and shape the future, but also professions that will not exist in a few years as technology continues to advance.

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DYNAMIC INTERACTIVITY IN EDUCATIONAL TECHNOLOGY: ENHANCING ENGAGEMENT AND LEARNING THROUGH DIVERSE MODALITIES

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Abstract

This paper explores the multifaceted role of interactivity in educational technology, highlighting its crucial impact on enhancing learner engagement, comprehension, and retention. Interactivity in educational settings encompasses a broad spectrum of exchanges between learners, content, instructors, and technological interfaces, effectively supporting a wide array of learning styles and needs. Advanced technological tools such as adaptive learning systems, virtual reality, augmented reality, and AI-driven platforms have transformed educational methodologies, making learning more personalized, engaging, and accessible. This paper categorizes and discusses various forms of interactivity: learner-content, learner-learner, learner-instructor, learner-interface, learner-environment, personalized, gamified, and multimedia interactions. Each category is examined for its potential to facilitate a constructivist learning environment where students actively construct knowledge through dynamic participation. The integration of these interactive technologies fosters not only individual learning but also collaborative skills, problem-solving abilities, and a deeper engagement with educational content. Through a review of current literature and empirical studies, this paper underscores the effectiveness of these interactive approaches and their transformative potential in educational practices. It argues for continued evolution and integration of interactive technologies to meet the changing needs of learners and to further enrich the educational landscape. This exploration aims to contribute to the broader understanding of how dynamic interactivity can shape the future of education, making it more engaging, inclusive, and effective for a global cohort of learners.

Key Words: Educational Technology, Interactivity

I. Introduction

In the rapidly evolving field of educational technology, interactivity is increasingly recognized as a pivotal element that enhances learning outcomes, engages learners, and facilitates deeper comprehension and retention of information. Interactivity in education goes beyond mere communication; it involves meaningful and dynamic exchanges between learners, content, instructors, and the technological interfaces that deliver educational experiences (Clark & Mayer, 2016). This paper explores the various forms of interactivity in educational settings, which include learner-content, learner-learner, learner-instructor, learner-interface, learner-environment, personalized, gamified, and multimedia interactions. Each type caters to different aspects of the learning process, supporting diverse educational needs and preferences.

Recent advancements in technology have significantly expanded the possibilities for interactive learning, introducing sophisticated tools that range from adaptive learning systems and immersive virtual reality environments to AI-driven platforms that personalize learning paths (Baker, 2016; Dalgarno & Lee, 2010). These technologies have transformed traditional educational methodologies, making learning more accessible, engaging, and effective. For instance, gamification elements such as points and badges are employed to motivate learners by tapping into their intrinsic and extrinsic motivation factors (Hamari, Koivisto, & Sarsa, 2014).

The integration of such interactive technologies into educational practices not only supports varied learning styles but also encourages a deeper engagement with the content, facilitating a constructivist

approach to learning where students build knowledge through active participation (Johnson & Johnson, 1994). This paper delves into the effectiveness of these interactive approaches by examining how they contribute to the educational experience, supported by empirical evidence and theoretical frameworks that highlight their impact on learning outcomes.

II. Interactivity in educational technology

Interactivity in educational technology is pivotal in enhancing learning experiences by engaging students, improving information retention, and facilitating deeper understanding. As educational environments evolve, various interactive approaches have been developed to cater to different aspects of learning, ranging from direct content interaction to collaborative and personalized learning experiences.

a) Learner-Content Interactivity

Learner-content interactivity is foundational in educational technology, focusing on the direct engagement between learners and educational materials. This interaction often involves digital content, textbooks, or multimedia presentations. Interactive e-books, for example, allow learners to engage deeply with content through embedded videos, clickable terms, and integrated quizzes (Mayer, 2009). Similarly, simulations and educational games enable active participation, enhancing conceptual exploration and understanding (Clark & Mayer, 2016). Adaptive learning platforms represent a sophisticated application of this interactivity, tailoring content in real-time to match the learner's progress and understanding, thereby optimizing the learning experience (Knewton, 2017).

b) Learner-Learner Interactivity

The interaction among learners, known as learner-learner interactivity, is crucial in building collaborative skills and enhancing learning through peer interactions. Platforms such as discussion forums, chat rooms, and collaborative tools like Google Docs facilitate these interactions by enabling students to exchange ideas, engage in discussions, and provide peer feedback. This approach not only supports knowledge sharing but also fosters a sense of community among learners, which is vital for collaborative learning environments (Johnson & Johnson, 1994).

c) Learner-Instructor Interactivity

Interactions between learners and instructors are essential for providing guidance and feedback. This interactivity can occur in real-time, as seen in live video conferencing and webinars, or asynchronously through emails and message boards. Live sessions allow for immediate feedback and dynamic discussions, while asynchronous interactions enable instructors to provide detailed feedback on assignments and respond to student queries at scale (Borup, West, & Graham, 2014).

d) Learner-Interface Interactivity

The interface through which learners interact with content significantly affects their learning experience. User-friendly Learning Management Systems (LMS) such as Moodle or Canvas facilitate easy navigation and access to resources, enhancing the learning process. Emerging technologies like Virtual Reality (VR) offer immersive learning experiences, allowing students to interact with three-dimensional models and environments, thus providing a deeper understanding of complex concepts (Dalgarno & Lee, 2010).

e) Learner-Environment Interactivity

This type of interactivity involves the use of technology to connect learners with real-world environments or simulations. Augmented Reality (AR) apps can overlay educational content onto real-world settings, enhancing field experiences like historical site tours or virtual museum visits. Similarly,

Internet of Things (IoT) devices in laboratory settings can provide learners with the opportunity to interact with live data and participate in real-time experiments, thus bridging the gap between theoretical knowledge and practical application (Billinghurst & Dunser, 2012).

f) Personalized Interactivity

Personalized interactivity focuses on tailoring the learning experience to individual needs through adaptive technologies. AI-driven tutors, for instance, adjust instructional pace and content based on individual learner profiles, effectively addressing diverse learning styles and speeds. Platforms like Khan Academy utilize algorithms to adjust the difficulty of exercises based on student performance, thereby offering a customized learning journey (Baker, 2016).

g) Gamified Interactivity

Gamification incorporates gaming elements into learning to motivate and engage students. Apps like Duolingo use points, levels, and badges to encourage progress, while educational competitions add a layer of excitement and challenge to the learning process. These gamified elements make learning enjoyable and can significantly increase student motivation and engagement (Hamari, Koivisto, & Sarsa, 2014).

h) Interactive Video and Multimedia

Multimedia resources like interactive videos, animations, and audio lessons engage learners more effectively than traditional methods. These resources allow learners to interact with content actively, choosing pathways in videos, manipulating variables in animations, or participating in integrated quizzes within audio lessons. This active involvement can lead to improved comprehension and retention of information (Moreno & Mayer, 2007).

i) Synchronous and Asynchronous Platforms

Synchronous platforms facilitate real-time interaction, which is crucial for immediate feedback and engagement. Asynchronous platforms, however, provide flexibility, allowing learners to interact with content and peers at their own pace, catering to diverse schedules and learning speeds (Hrastinski, 2009).

These approaches collectively enhance the educational landscape by offering dynamic, interactive, and effective learning environments. They reflect the shift towards more engaging and learner-centered education models, capable of accommodating various learning preferences and needs.

Conclusion

The integration of diverse interactive technologies into educational practices not only enriches the learning experience but also prepares learners to thrive in an increasingly digital world. It encourages the development of critical skills such as collaboration, problem-solving, and self-directed learning. As educational technology continues to evolve, it is imperative that educators and technologists work collaboratively to refine these interactions, ensuring they meet the evolving needs of learners and continue to push the boundaries of what educational experiences can provide.

The future of education lies in its ability to effectively integrate these interactive modalities, fostering environments that are not only informative but also profoundly transformative. As this paper has explored, the effective application of interactivity in educational technology is not just about incorporating new tools, but about creating deeper, more meaningful educational experiences that engage students on multiple levels, paving the way for a more informed and engaged global citizenry.

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EFFECTIVENESS OF LIFE SKILLS TRAINING ON SELF-AWARENESS AMONG SECONDARY SCHOOL STUDENTS

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Abstract

The societal life at present filled with complete complexities. One needs to develop certain skills and competencies to face these complexities to lead life satisfactorily. For that one needs to know his/her likes and dislikes, strengths/weakness and to accept the feedbacks in positive way. All these would get to know through the development of Self-awareness which is very important skills at present to the young generation to avoid chaos in their complex society. To attain such skills education is the means in through which we can develop life skills to increase self-awareness among students. This present study aimed to assess the effects of life skills training in developing self-awareness among adolescents. For the present pretest posttest experimental study was used. 80students from ninth grade selected from Anubhavamanthapa School Davanagere district Karnataka state. Mean, Standard deviation and ANOVA were used to analyze the data and results revealed that life skills training program significantly enhances the self-awareness among secondary school students.

Key words: Self-awareness, influence, complexities, Life skills training, imbibe, potential

INTRODUCTION:

Education should be in such a way that completely filled with happiness. That should not giving joy only in childhood and become joyless in youth, the happiness of youth should not cause sorrow in adulthood. That is real education as a result of which the whole of society becomes happy through the happiness of the individual. That should be education which removes suffering, increases happiness, and makes it life long-lasting. And that is possible only through acquiring life skills training. Life skills training help one to attain various skills and abilities to face this complex society in positive way to make life happy. Life skills education is developed recently. The first extensive proposal for life skills education was made by Winthrop Adkins and Sydney Rosenberg in their training program for Youth Centre in New York (Conger, 1973). Later considering the importance of life skills the World Health Organization promotes a school based life skills programs as a means to develop skills amongst young people to help them lead a healthy life. The UNICF-MENA(2017) regarded life skills as across cutting, interconnected and overlapping application of knowledge, values, attitudes and skills which are integral to quality education and are universally applicable and contextual (Dr.Radhakrishnan 2021).

Life skills are the abilities through which one can develop positive attitudes and skills to face the day to day challenge which exits in their life. These skills help students to acquire self-awareness, self-confidence, and communicative skills, cooperative & collaborative skills to socialize them and lead life happily. Life skills training provide individuals with a comprehensive set of tools to understand them better. Life skills training go beyond traditional way adopting various activities and methods researcher tries to develop self-awareness among adolescents. Self-awareness is a crucial skill which helps to develop other skills such as emotional intelligence, critical thinking, and self-reflection. Swami Vivekananda urged that awareness is a simple act of acknowledging reality as it is. And person's actions are influenced by their self-awareness. Hence development of self awareness is very much important for the all round development of an individual.

Self-Awareness

The theory of self-awareness was first conceptualized by Duval and Wick Lund in 1972 stating that self-understanding can be achieved by self-evaluation. Understanding oneself in this context is through thoughts, feelings and behavior through a process looking into the self and the existing standard of truth (Duval & Silvia, 2001; Duval, Silvia & Lowland, 2001). Individuals with self-awareness will be able to attribute the consequences of an act they have done to themselves, not others, so that they will consciously understand the results of the decisions they make (Duval & Wick Lund, 1973). This concept is later developed by several researchers (Feinstein, Schemer & Buss, 1975; Buss & Schemer, 1976; Geller & Shaver, 1976; Hull & Levy, 1979).

To achieve these set goals, individuals need an awareness of their ability to overcome and solve the problems in learning (Boekaerts, 1999; Fischer, Gauggel & Trexler, 2004). Self-awareness is individual's ability to focus attention on him, understand the feelings inside him and realize the influence of these feelings on others (Wicklund, 1975; Wicklund & Gollwitzer, 1987; Duval, Silvia & Lalwani, 2001). There are three aspects of self-awareness, namely private self-consciousness, public self-consciousness and social anxiety (Fenigstein, Scheier, dan Buss, 1975; Scheier dan Carver, 1985; Higa, Phillips, Chorpita, Daleiden, 2008; Morin, 2011). Self-awareness focuses on two situations, namely when a person focuses on his thoughts, feelings, actions or appearance and perceptions of himself, and when making decisions or plans that involve him (Fenigstein, Scheier & Buss, 1975).

With self-awareness, a person is able to understand his own state and compare himself with the actual situation around him (Duval, Silvia & Lalwani, 2001). A person with high self-awareness will be able to understand the impact or outcome of the decisions they make (Duval & Wicklund, 1973). High self-awareness will keep students in fulfilling the goals that have been set from the learning process. (Travers, Morisano & Locke, 2015). Self-aware students can understand their potential, and on the other hand, recognize the limitations that they need to overcome (Ridley, Schutz, Glanz & Weinstein, 1992). Self-awareness is a condition in which individuals are able to realize their strengths and weaknesses and are able to realize their interests so that they can be focused appropriately (Gunawan & Wulandari, 2017). Duval & Wicklund (in Wicklund, 1975; in Leary & Hoyle, 2009) state that self-awareness is focusing the attention on oneself. Self-awareness refers to the capacity to make oneself an object on which one's own attention is focused.

REVIEW OF RELATED LITERATURE:

Dr Nidhi Tarun (2018)- conducted a study to assess the impact of the life skills education program on young girls in the areas of adjustment with parents, siblings, teachers and peers; self-awareness in terms of coping with a variety of demands in life and self-respect. One hundred young girls were selected from CIS Konya Mahavidyla, Haryana. Fifty young girls were given Life skills education program for a period of two months, while the other fifty young girls were taen as control group and were ot exposed to any program. Results revealed that young girls who were given LSE program had better adjustment; better perceived self-awareness and self-respect than those who were not provided any LSE program. Results indicated that the program prepares the young girls to be competent Peron in a changing and competitive society.

Dr.T. Priyadharshini and Dr.S.Esther (2021) conducted a study to at Avinashiligam Deemed University, special education department, 30 women with disability in higher education was taken as sample for the study. The aim of the study is to improve the level of self-awareness of women with disability in higher education through life skill intervention. The intervention was planned for one

week. Self-awareness scale by Kathrin (2013) was applied to find out the pre test and post score on self awareness and findings of the study revealed that there is significant difference between pre test and post test score. Hence it is concluded that an effective intervention such as life skill training is essential for women with disability in higher education in understanding their strength and weakness so that they can easily break the personal and social bearers and lead a very self-reliant and self dependent life.

NEED OF THE STUDY:

It's very important to know the level of Self-awareness among adolescent, including its development antecedents and correlates as well as its relation to adaptive outcomes, is important for both theoretical and practical reasons. The development of adolescent Self-awareness is central to theories of development and research on competence. From practical standpoint, the promotion of Self-awareness has been identified as a key resource for preventing adolescence problem behavior and enhancing positive development in children and adolescents. With this respect, the present paper focuses on "Effectiveness of Life skills Training on Self-awareness among secondary school students."

OBJECTIVES OF THE STUDY:

- To develop Life skills training modules to enhance the Self-awareness.
- To assess the level of Self-awareness among secondary school students.
- To find the effect of Life skills training on Self-awareness among secondary school students.

HYPOTHESES:

- There is no significant difference in mean gain scores of experimental and control groups with respect to Self-awareness.

METHODOLGY:

SAMPLE:

The study was carried out at Anubhavamanthapa School situated in Davangere district of Karnataka state. 80 students from grade ninth from STCS Anubhavamathapa School, Davangere Karnataka were selected using random sampling technique. All these 80 students first assessed to know their level of Self-awareness. On the basis of total scores of Self-awareness these students were divided into two groups as –experimental group and control group.

TOOL:

Self-awareness skills scale developed by the researcher with the help of research guide was used to measure the self-awareness skills of secondary school students. The scale consisted 45 items represented d in five subscales. It is a five point scale including positive and negative items. The reliability of the scale was estimated by using Cronbach's alpha method. The reliability coefficient was found 092. The validity of the scale was checked by getting experts review and scores.

DEVELOPMENT OF LIFE SKILLS TRAINING MODULE

Life skills training modules were important aspect of the study which is constructed and validated by the researcher with the help of research guide and experts in the field. Researcher has attended various life skills training workshops, and referred existing training modules and then prepared modules which help to achieve present research objectives. These modules consist 20 sessions followed by assessment sheets. It includes various activities and measures to assess and enhance the self-awareness among secondary school students.

CONDUCT OF THE STUDY:

The study was conducted in three stages:

a. **Pre-test stage**: The pretest was given to 80 students at Anubhavamanthapa school, Davangere district in Karnataka by the researcher itself. The pretest conducted using Self-awareness skills scale at school in the classroom. Before conducting this pretest proper interaction was done and given clear instructions to prepare students for the test.
b. **Experimental Training stage:** 80 students were divided into two groups and one group with 40 students were selected for experiment. Life skill training was given to the experimental group. The sessions were carried out for 45 days in school premises having various activities and sessions.
c. **Post- test stage:** after completion of the Life skills training posttest given to students using the same Self-awareness scale.

RESULTS:

For the result analysis Mean, Standard deviation and ANOVA statistical techniques' were used. This is representing in the following tables.

Table-1 shows the mean and Standard deviation scores of self-awareness scores of Experimental and Control group.

Groups	Pre-test Mean	SD	Post-test Mean	SD
Control Group	1.05	0.520	5.53	0.18
Experimental Group	1.33	0.16	1.65	0.625

Table-2 shows the covariance analysis to examine the effects of life skills training on increasing in self-awareness.

Partial Eta	Sig	F value	Mean Square	df	Sum of sq	Effects
0/11	0/03	0.0625	1.145	1	1.145	Life skill Training
			0.35	37	8.09	Error
				40	6546	Total

According to table 1, we can infer that the mean scores of the Experimental group in the pre-test for self-awareness was 1.33. This has increased to 1.65 in the post test.

According to table 2, we can infer that the difference in the self-awareness scores between the experimental and control group is statistically significant, in a way that training life skills can result in increase in self-awareness. According to the Eta squared, value of this effect is 11%.

DISCUSSION:

The main objective to conduct this study was to analyze the effects of Life skills training on Self-awareness among secondary school students studying in class 9. The result of the study revealed that Life skills training increases self-awareness among the students who were in the experimental group.

CONCLUSION:

The equal development of self-awareness and true intellect is true education. We consider a person to be truly educated and self-aware who has had the opportunity to receive proper education and life skills training would enjoy good health, and lead his/her life with full of energy. It must be noticed self aware person have a profound perception of pleasure and pain and appreciation for life. So only it is very important that all the stakeholders need to consider the importance of self-awareness and adopt interdisciplinary methods to inculcate self-awareness among secondary school students to lead their life and face this complex societies with confidence.

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CHALLENGES AND OPPORTUNITY IN TEACHER EDUCATION UNDER NPE 2020

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Abstract

The National Education Policy (NEP) 2020 is India's first major educational reform of the 21st century, designed to address the country's evolving developmental needs by restructuring the education system at all levels. Teacher education is at the heart of this transformation, given that teachers are pivotal in ensuring the successful implementation of the policy. This paper explores the challenges and opportunities in teacher education under NEP 2020. Among the key challenges are the modernization of outdated teacher training programs, enhancing practical exposure in teacher education, and ensuring equal access to quality education, especially in rural and remote regions. These issues call for a more inclusive and robust teacher education framework.

Despite the challenges, NEP 2020 also presents numerous opportunities for advancing teacher education. The policy promotes multidisciplinary, practice-based training, ongoing professional development, and the adoption of modern pedagogical tools, such as digital learning platforms and technology-driven teaching methods. It strives to professionalize teaching, positioning educators as essential agents in societal development. With its focus on holistic and experiential learning, NEP 2020 aims to empower teachers to instill critical thinking, creativity, and ethical values in their students. This paper argues that if implemented effectively, NEP 2020 could revolutionize teacher education in India, establishing a future-ready system aligned with global standards while preserving the country's cultural identity.

Key Words: NEP 2020, Teacher Education, Educational Reform, Professional Development, Holistic Learning, India, Pedagogy

INTRODUCTION

India has long been recognized as a global center of learning, with a rich heritage of knowledge spanning ancient sciences, arts, philosophy, and literature. However, over time, the country's education system has struggled to keep up with rapid global developments in pedagogy, technology, and educational practices. To address this, the Ministry of Education introduced the National Education Policy (NEP) in 2020, marking the first comprehensive education reform in 34 years, replacing the National Policy of Education (NPE) of 1986.

Education is fundamental to the social, economic, and political development of a nation. As societies evolve, educational policies must adapt to meet changing societal needs. India's journey in education reform began with the implementation of its first national education policy in 1968 under Prime Minister Indira Gandhi. This was followed by the NPE 1986 under Prime Minister Rajiv Gandhi, and now NEP 2020 under Prime Minister Narendra Modi. While previous policies addressed significant issues, certain crucial aspects of education, especially in the context of teacher education, were not adequately addressed. NEP 2020 seeks to bridge these gaps by making education more accessible, inclusive, and forward-thinking.

A central objective of NEP 2020 is to achieve a 100% Gross Enrolment Ratio (GER) by 2030 at the school level, encompassing pre-primary education—an area previously overlooked. The policy also advocates a shift away from rote learning toward fostering critical thinking, creativity, and problem-solving skills among students. Despite NEP 2020's comprehensive roadmap, its successful implementation across various sectors and geographies remains a formidable challenge.

LITERATURE REVIEW

The NEP 2020 has been widely discussed in academic circles and educational forums due to its ambitious goals and transformative agenda. This literature review offers a critical examination of key

research surrounding NEP 2020, particularly in relation to teacher education, implementation challenges, and potential outcomes.

Aggarwal (2021) provides a historical overview of India's education policies, tracing their evolution from the Kothari Commission (1964-66) to NEP 2020. His analysis highlights the continuity of certain educational themes, such as the emphasis on access and equity, while also underscoring the innovative aspects of NEP 2020, particularly in its focus on technology integration and interdisciplinary learning.

Kumar (2020) critically evaluates the core principles underlying NEP 2020, such as early childhood education, the introduction of multidisciplinary education at all levels, and the integration of digital technology in classrooms. While Kumar acknowledges the transformative potential of these reforms, he emphasizes that governance and execution will determine their success. Factors such as teacher training, administrative support, and infrastructure development will play pivotal roles in achieving NEP 2020's objectives.

Singh (2021) delves into the governance frameworks necessary for the successful implementation of NEP 2020, identifying key challenges such as administrative inefficiencies, bureaucratic hurdles, and resource limitations. He argues that unless these systemic issues are addressed, the goals of NEP 2020 will remain aspirational rather than achievable.

Nambiar (2021) focuses on the persistent inequalities in access to quality education, especially concerning infrastructure and resource allocation. The disparity between rural and urban schools, as well as between different socio-economic groups, is stark. Nambiar calls for increased investment in educational infrastructure, particularly in underserved areas, to ensure that NEP 2020 benefits all students equally.

Mishra et al. (2020) examine the social justice dimensions of NEP 2020, with particular attention to marginalized groups, including girls, children from low-income families, and minority communities. Their research highlights the policy's potential to promote inclusive education, but they also stress that implementation strategies must be carefully crafted to ensure these groups are not left behind.

CHALLENGES AND OPPORTUNITIES IN TEACHER TRAINING

The effective implementation of NEP 2020 in the field of teacher education presents both significant challenges and promising opportunities. In this section, we will explore these aspects in detail.

Challenges in Teacher Training Institutions

1. **Inadequate Infrastructure and Resources:**
   Many teacher training institutions, particularly those in rural areas, lack the infrastructure needed to deliver modern, high-quality education. This includes access to digital technology, well-equipped classrooms, and experienced faculty. Without these resources, implementing NEP 2020's provisions on a large scale becomes difficult.

2. **Resistance to Change:**
   Resistance to reform is common in educational institutions, particularly when long-standing practices and systems are challenged. Faculty members, administrators, and policymakers may be hesitant to adopt new methodologies or integrate technology into their curricula. This inertia can slow the pace of reform and impede the transformative potential of NEP 2020. Addressing this requires strong leadership, effective communication, and a clear vision for change.

3. **Capacity Building:**
   Institutions need to develop the capacity to effectively implement NEP 2020's recommendations. This involves investing in faculty development programs, forming

partnerships with industries, and leveraging technology-enabled learning platforms to offer diverse learning experiences. Furthermore, building the capacity of teacher educators to train future teachers in alignment with NEP 2020's objectives is crucial.

4. **Teacher Preparation Programs:**
   One of the most critical challenges is revamping teacher preparation programs to meet the demands of a more dynamic, interdisciplinary, and technology-driven education system. The traditional focus on theoretical learning must be replaced with an emphasis on practical, hands-on experiences that reflect the real-world needs of 21st-century learners.

Opportunities in Teacher Training

1. **Collaborative Innovation:**
   NEP 2020 encourages collaboration between teacher training institutions, universities, schools, and industries. This presents an opportunity to share resources, exchange best practices, and create a more interconnected education ecosystem. Such partnerships can enhance the quality of teacher training by providing access to diverse perspectives, cutting-edge research, and practical applications of teaching methodologies.

2. **Continuous Professional Development:**
   Ongoing professional development is a cornerstone of NEP 2020, offering teacher training institutions the chance to innovate in how they support teachers throughout their careers. Institutions can create customized professional development programs that address the specific needs of educators at various stages of their careers. This could include workshops on new pedagogical techniques, technology integration, and classroom management strategies.

3. **Quality Assurance Mechanisms:**
   NEP 2020 introduces new mechanisms for quality assurance in teacher education. These include accreditation systems, peer reviews, and regular evaluations that allow institutions to continually improve their programs. Institutions that embrace these mechanisms will have the opportunity to raise their standards and establish themselves as leaders in the field of teacher education.

NEED AND RATIONALE FOR THE STUDY

NEP 2020 introduces numerous reforms that significantly impact teacher education, making it imperative to understand both the challenges and opportunities these reforms present. This study aims to explore the key aspects of NEP 2020 as they relate to teacher education, the potential impact of these reforms on the quality and accessibility of teacher training, and strategies for overcoming the challenges associated with their implementation.

OBJECTIVES OF THE STUDY

1. To critically examine NEP 2020's recommendations for teacher education and professional development.
2. To assess the potential impact of these reforms on the quality, relevance, and accessibility of teacher education in India.
3. To identify the challenges and opportunities presented by NEP 2020 for teacher training institutions.
4. To offer actionable suggestions for enhancing teacher education and promoting professional development within the framework of NEP 2020.

JUSTIFICATION FOR THE OBJECTIVES

1. **NEP 2020's Focus on Teacher Education:**
   NEP 2020 places a strong emphasis on the role of technology in advancing teacher professional development. By utilizing online platforms, teachers can collaborate with their peers around the world, gaining insights and exchanging innovative teaching strategies. This is crucial for adapting to diverse student populations and evolving educational needs.

2. **Impact on Teacher Education Quality:**
   NEP 2020 aims to elevate the quality of teacher education by introducing a minimum qualification requirement of a four-year integrated B.Ed. degree by 2030. This reform seeks to improve the preparation of teachers, ensuring they are well-equipped to meet the demands of modern classrooms and diverse learning environments.

3. **Addressing Challenges and Capitalizing on Opportunities:**
   Teachers need to understand the unique needs, strengths, and weaknesses of their students in order to create more engaging and effective learning environments. NEP 2020 recognizes that teacher training programs must combine high-quality content with modern pedagogical approaches to achieve this goal. Furthermore, overcoming resistance to change and addressing resource limitations will be critical for success.

4. **Enhancing Professional Development:**
   Teachers should be encouraged to engage in continuous learning through professional development programs. Offering opportunities for collaborative learning, instructional technology training, and the development of strong classroom management practices will be essential for preparing educators to thrive in the 21st-century classroom.

CONCLUSION

The National Education Policy 2020 represents a significant milestone in India's education system, particularly with regard to teacher education. While the policy introduces groundbreaking reforms, its success will depend on overcoming various challenges, including resource limitations, resistance to change, and the need for institutional capacity building. Nevertheless, the opportunities presented by NEP 2020—including collaborative innovation, continuous professional development, and enhanced quality assurance mechanisms—offer a pathway toward a more inclusive and future-ready teacher education system. With effective implementation, NEP 2020 has the potential to elevate teacher education in India, aligning it with global standards while fostering holistic, culturally grounded learning experiences for students.

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COGNIZANCE OF EDUCATION PSYCHOLOGY – AN EFFECTIVE INSTRUMENT FOR TEACHING SPECIAL CHILDREN

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Abstract

Educational psychology is an attempt to approach a child with empathy as well as with knowledge about their emotional, cognitive, social and behavioral needs. The challenges that, children are facing today are unprecedented. The pandemic has disrupted their education, their social life and altered their perception of the world forever. At such a time, it is even more important to make space for their anxieties, fears and possible inability to focus single-mindedly on academics. In a nutshell, educational psychology is not just about how children are behaving or faring in academics but is focused on all-around development as they transition from child hood and adolescence. It teaches to understand that learning is retained in different ways and that instructional methods must address the social, emotional, and cognitive particularities of the Special children. Child who has a disability or learning problem that makes it harder for them to learn or do other activities than other children their age. Children with special needs may have difficulty with schoolwork, communication, or behaviour. Educational psychology is a constantly evolving field and researchers are busy exploring how to empower children with these special needs and so that together they can get past the factors that inhibit learning. It helps to identify children with special needs, tackle classroom problems, skills and interest in teaching, effective methods of teaching, the influence of heredity and environment on the child, the mental health of the child, the procedure of curriculum-making, guidance and counseling, assessment and evaluation. The present paper will describe the cognizance of Education Psychology is a prime instrument to become an effective classroom teacher in solving the problems of special children in the present education system.

Keywords: Cognizance, Education Psychology and Special Children.

INTRODUCTION:

Psychology means the subject which deals with the study of human behavior or behavior of the organism. Every human being shows some behavior in response to the environment stimulus. Behavior of an individual is the reflection of his/her thinking, attitude and reaction to the different situations or objects. According Woods worth, "Psychology is the scientific study of the activities of individual in relation to the environment. Educational Psychology is that branch of applied psychology which studies the application of the conclusions of theoretical psychology to the process of education and teaching. According to Skinner, "Educational Psychology is that branch of psychology which deals with teaching and learning.

Special-needs children include those who have: Mental Retardation, which causes them to develop more slowly than other children. Speech and Language Impairment, such as a problem expressing themselves or understanding others. Physical Disability, such as vision problem, cerebral palsy, or other conditions. With such understanding, Education Psychology has much to contribute in the teaching-learning process and definitely it as a cardinal instrument for effective classroom teacher in teaching special children. This paper mainly focuses on the importance of an educational psychology to become an eminent teacher in the teaching-learning process for the all-round development of the Special children.

BACKGROUND:

Educational Psychology not only deals with the behavior that arises in an educational setting but also analyzes and solves the problems related to the normal and special children. The main aim of Educational Psychology is to report the various studies undertaken in the field of special education.

These studies help in planning curriculum content and design educational objectives for the special children. It helps the teacher to become a better and effective teacher in analyzing special children. With the development of standardized psychological tests, the teacher today is in a better position to access accurately the reliability to what extent a child with a special needs has to taught differently and bring back them to the main stream of education.

Special needs children are children who have disability, health or mental health or mental health conditions requiring early intervention and supports. Education Psychology has important contributions to understanding, explanation, prediction, control, and solves problems of special needs children. The real contributions of the education psychology are in a collaborative process with other stakeholders in a children's bio-psycho-social system. The system involves the children, family, community, educators and educational systems, and other professional. In this context, the contributions of education psychology are best given within a multi-disciplinary group. Education psychology apply psychology theories in understanding, explanation, prediction, control, and solve problems of special needs children. For applied psychologists, theories are the important tool for understanding, explaining, predicting, controlling, and solving problems of special needs children.

Besides these, Educational Psychology helps the teacher in selection and implementation of adequate methods of teaching, curriculum construction and improvement, measurement of learning outcomes (examination and evaluation), developing co-curricular activities, developing democratic educational environment, improving personal relations and use of innovations in the classrooms for special children. It teaches educators to understand that learning is retained in different ways and that instructional methods must address the social, emotional and cognitive particularities of the children with special needs. Broadly speaking, educators can benefit from a study of developmental, behavioral and cognitive psychology in solving various problems of the special children in a smooth and effective manner.

CONTRIBUTION OF EDUCATIONAL PSYCHOLOGY TO THE FIELD OF SPECIAL EDUCATION:

History of educational psychology is as old as the process of education on earth. A large number of eminent scholars and scientists have contributed to the development of education psychology from time to time. The function of educational psychology is to promote greater understanding of the learning process, of the learning situation and of the learner and will put the teacher in a better position to decide the line of action. It also enables the teacher to do more effective job by developing some of the insights, skills and attitudes to solve problems and make the teaching- learning process more effective and brings improvement in the quality of instruction to the special children.

Thus, knowledge of educational psychology helps the teacher in many ways- To understand the special child and his characteristics unless the teacher has some knowledge of the potentialities of the learner, he cannot go ahead with his task. Educational psychology provides teachers with a means to educate individuals with disabilities who may not otherwise have access to the first-rate education they deserve. Educational psychology equips teacher for understanding the special child in the following ways- a) His interests, attitudes, aptitudes and other acquired or innate capacities and abilities. b) The stage of development linked with his social, emotional, intellectual and physical needs. c) His level of aspiration. d) His motivational behaviour. e) The aspect of his group behaviour. f) Conflicts, desires and other aspects of his mental health.

COGNIZANCE OF EDUCATIONAL PSYCHOLOGY IN TEACHING SPECIAL CHILDREN:

Educational psychology has completely altered the special education landscape. Whereas students with disabilities were once segregated from the rest of the student population, educators now know that the majority of students with disabilities can achieve the same academic standards as their non-disabled

peers. However, the needs of every student with a disability must be accounted and provided for if they are to achieve academic success. It is an important tool for teachers that help them understand what special children need to succeed in school and in life. It also helps the teachers to teach effectively in the classroom. Teachers can help special children by using innovative teaching methods and strategies according to the behavior and understanding of these special students.

It is fair to say that the bulk of educational psychology as a discipline has been focused and based on "mainstream" or "typically" developing learners. Relatively little educational psychology theory, research, measurement, and practice has attended to students with special needs. Because these students experience significant academic difficulties, this limited scholarly attention is a significant gap in educational psychology - and also limits the potential for educational psychology to meaningfully contribute to other disciplinary areas that seek to assist students with special needs. Addressing these limitations will provide researchers and practitioners with critical domain-specific expertise on the factors and processes relevant to learning for students with special needs.

Because educational psychology fundamentally focuses on learning factors and learning processes, it is in a unique position to understand and study students who are at academic risk wholly or partly because of a special need. Answers unearthed here will substantially augment current understanding of at-risk students among educational psychology researchers and practitioners. Importantly also, answers unearthed here can in turn contribute to other important channels of knowledge and practice in developmental psychology, school psychology, and counseling psychology - and also educational (e.g., special education) and medical (e.g., pediatric) disciplines. Thus, we can substantially guide the development, implementation, assessment, and refinement of successful multidisciplinary interventions to support and optimize these at-risk students' educational trajectories.

➢ Educational psychology focuses on identifying and addressing central problems in special education.

➢ Educational psychology clearly depends on understanding the behavior and individual differences of special children.

➢ Educational psychology helps teachers gain insights into needs, strengths and challenges of special children.

➢ Educational psychology helps teachers understand cognitive capacity and information retention abilities of children with special needs.

➢ Educational psychology helps to identify, diagnose, cure, and prevent the problems faced by the special children.

Educational psychology plays a crucial role in special education for several reasons:

1. *Understanding Learning Differences:* Educational psychology provides insights into how different students learn, particularly those with disabilities. It helps educators recognize the unique cognitive, emotional, and social needs of these students.

2. *Individualized Instruction:* It emphasizes the importance of tailoring educational approaches to meet the individual needs of students. This includes developing Individualized Education Programs (IEPs) that are grounded in psychological principles.

3. *Behavioral Strategies***:** Many students with special needs may exhibit challenging behaviors. Educational psychology offers strategies for behavior management and intervention, helping educators create supportive learning environments.

4. ***Assessment and Evaluation:*** Psychological assessments are essential for identifying learning disabilities and other special needs. Educational psychologists are trained in administering and interpreting these assessments, which inform instructional decisions.

5. ***Support for Social-Emotional Development:*** Educational psychology addresses the social and emotional aspects of learning, which are particularly important for students with special needs. Understanding these factors can lead to better outcomes in both academic and social contexts.

6. ***Collaboration and Advocacy:*** Educational psychologists often work with teachers, parents, and other professionals to advocate for and support students with special needs. Their expertise is vital in fostering effective communication and collaboration among all stakeholders.

7. ***Selection of Learning Methods***: Learning methods are based on the needs of the special children. Educational psychology can help teachers to determine the best strategy or method of teaching and learning proper and appropriate, as well as relating to the characteristics and uniqueness's of the special children. Having a proper understanding of special children helps curate the best learning methods and strategies.

8. ***Knowing What is Important:*** It focuses on what is important when we talk about learning and teaching. It provides the most important information and skills to teachers to handle special children. These exclude all theories and views that rely on personal opinions and inaccurate and subjective observations about special children. It also helps teachers to understand the needs of each special children and what kind of education will benefit them best.

9. ***Building a Conducive Learning Environment:*** It plays an important role in helping teachers design a suitable learning environment. Teachers need to know how to create a positive emotional climate in the classroom, so the learning process can be effective for the special children. Teachers need to know what kind of learning climate they want to create in class room for the children with special needs.

10. ***Design, Organize and Evaluate***: Time tables should be designed based on the needs of the special children. It plays an important role in helping teachers design, organize and evaluate school teaching activities for special children. It provides teachers with the skills necessary to teach effectively to them.

11. ***Providing Proper Guidance***: Teachers need to understand each special children needs and help them succeed. Teachers should guide special children through the learning process, helping those overcome obstacles and difficulties from their disabilities. Educational and vocational guidance is necessary for the special children at different stages of life. It also helps teachers to identify and address any issues that may interfere with their learning.

In summary, educational psychology is integral to special education as it informs practice, enhances understanding of diverse learners, and supports the development of effective teaching strategies that cater to the unique needs of students with disabilities.

APPLICATION OF EDUCATIONAL PSYCHOLOGY IN TEACHING SPECIAL CHILDREN:

1. ***Development of Special children:*** Educational Psychology lets you understand the special children traits, past experiences and how they react to different situations. These inputs will let you design the learning programs worthy of overall development of special children.

2. ***Designing New Learning Processes:*** Educational Psychology helps to develop new learning processes according to the skill and understanding of special children. It includes finding new ways of thinking, reasoning and problem-solving.

3. ***Effective Learning Processes:*** Educational Psychology will help you in making the learning process enjoyable and effective. It ensures that special children learn the right thing at the right age.

4. ***Personality Development in Students:*** Educational Psychology can potentially develop the special children personality at an early stage. By using appropriate psychological principles, you can ensure special children overall development.

5. ***External Environment:*** The learning capabilities of the special children are also affected by the external environment, such as communication skills, the atmosphere of the classroom etc. Educational psychology will help you provide a conducive learning environment to the special children, which allows them to learn to the best of their abilities.

6. ***Make Changes to the Conventional Study Material and Curriculum:*** Educational Psychology also helps in making positive changes in the curriculum of special schools. It will provide maximum benefit to the special children. Study material can be prepared in case studies, presentations, videos and quizzes, making learning more engaging and productive.

7. ***Mental Well-being of special children:*** In today's competitive world, stress has become part of everyone's life, including special children. Through Educational Psychology, you can suggest simple ways to learn and provide guidance to special children to prevent them from unnecessary stress.

CONCLUSION:

Education is more than just delivering knowledge; it is also about understanding how special children learn and meet their specific needs. This is where educational psychology comes into play. Educational Psychology is an important branch of psychology that focuses on the development of special children also. The primary focus of educational psychology is the study of how people learn. This includes exploring the instructional processes, studying individual differences in how special children learn and developing teaching methods to help them learn more effectively. It studies the factors that affect the growth and development of special children. It helps educators to understand what special children need to succeed at school and at home.

Educational Psychology helps teachers to identify strengths and weaknesses of special children in the process and outcome of the education process. Teacher may harness the power of educational psychology to maximize the effectiveness of his instruction. In Conclusion, Educational Psychology is very important to teachers and it should be highly embraced for effective performance special children in special as well as inclusive schools. Teachers are now able to understand different children with special needs in the learning environment. Thus, Education Psychology and Special Education are inseparable one. Education psychology makes the children with special needs shine as a wonder kids and helps them to overcome from their disabilities to lead a successful life with in the society.

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DILEMMAS AND DISPARITIES IN THE IMPLEMENTATION OF THE LANGUAGE POLICY: CHALLENGES IN THE NEW EDUCATION POLICY

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Abstract

The New Education Policy (NEP) has introduced a multilingual approach to education, aiming to promote linguistic diversity and inclusivity. The motive of the New Education Policy is to guide the enhancement of education in the subcontinent, considering the tradition and culture, and adopt its different stages at school and college education levels to make it effective. However, the implementation of this language policy faces numerous dilemmas and disparities, posing significant challenges to its success. This study investigates the obstacles hindering the effective implementation of the language policy, including inadequate infrastructure, insufficient teacher training, and socio-cultural barriers. The research employs different approaches and perspectives to examine the diverse educational settings. The research also wants to circle around the current status of the English language at the school level. It also attempts to critically analyse the implementation of policies throughout the country and to highlight and address the impeding cultural disparities and multilingual dilemmas to implement the New Education Policy effectively.

Keywords: *Disparity, English Language, Multilingualism, New Education Policy, Language Policy.*

Education is the most important investment a nation can make in its youth and future. It is an essential human right that is fundamental to the change of the human mind with social life sensibility. One of the main pillars of society, education is essential to influencing people's lives and promoting growth and development. People learn the values, attitudes, abilities, and knowledge necessary for their professional success, personal development, and general well-being through education. Education is the key to both economic success and social participation on a global scale. It plays a crucial role in ending gender inequality, decreasing poverty, and building a nation that is sustainable.

The New Education Policy 2020 is the most recent of multiple modifications to India's educational policies in recent years. The goal of this policy is to transform higher education by making it more inclusive and up to date with the needs of the modern world. Access, equity, quality, affordability, and accountability in education are some of the topics that the policy focuses on. In the annals of Indian education, the New Education Policy (NEP) 2020 is a significant policy. It supersedes the earlier National Policy on Education, which was implemented in 1986, and was approved by the Union Cabinet of India on July 29, 2020.

The NEP suggests an all-encompassing and holistic approach to education, placing a strong emphasis on the value of creativity, critical thinking, and problem-solving abilities. It also encourages the use of technology in the classroom and multilingual education. The goal of the strategy is to establish an adaptable and inclusive educational framework that meets students' varied requirements and gets them ready for the quickly evolving global economy. All things considered, the NEP 2020 offers a blueprint for the future of education in India and is a major advancement in the modernization of the Higher Education sector.

India, a nation that supports universal education and has a liberal economy that is expanding, currently has over 900 universities and roughly 40,000 higher education institutions. This number

reflects the nation's high level of fragmentation and the large number of smaller higher education institutions that are connected to these larger universities. The national education policy is a move toward harmonization with international educational methodologies and standards. It attempts to improve the current educational system both qualitatively and quantitatively by implementing operational, financial, and structural reforms.

The use of languages always embodies a shared culture and the history encoded within it. Language encompasses any structured system of body movements, symbols, sounds, and signs utilized or devised as a method of expressing ideas. It holds sway over power, economics, authority, and regulates the realms of music, art, and culture; at times, it bolsters entire civilizations, while at others, it possesses the potential to dismantle them. Following the world wars, the concept of nation states led to the emergence of nationalism, which, in turn, brought about the quandary of establishing identity. Each country, region, and its populace began seeking common elements that could be representative of them, and language is one such element.

The use of language provided people with a sense of identity and belonging within their culture, leading to the formation of countries as people congregated in specific regions. As countries expanded, they sought to compete and exert dominance over others, using language not only for communication but also as a tool for propaganda. In the mid-twentieth century, a shift occurred as countries began implementing language policies to foster unity, impacting various aspects such as the economy, power dynamics, arts, literature, and the exchange of new ideas within each nation.

The focus of language education has evolved beyond mere communication to encompass the implications of linguistics, especially psycholinguistics and sociolinguistics, in the development of proficiency in additional languages. Over time, countries began prioritizing economic development and started emphasizing trade as a competitive endeavour on a global scale. This shift led to ideological conflicts related to domination, encroachment, propaganda, military expansion, and cultural hegemony.

Recent advancements in language policy have expanded to encompass not only actual language practices and ideologies, but also efforts to control the practices and ideologies of others. This governmental intervention has brought a renewed focus on highlighting the fundamental importance of regional language policy and has institutionalized education to align with the complex efforts to manage language practices in schools, colleges, administration, and the judiciary. Educational linguistics and language management represent the latest developments recognizing various approaches to enhancing the linguistic proficiency of individuals or groups, contingent on the formulation, assessment, and implementation of a language policy theory. The primary relevance here lies in expressing the identity of a group or community through their specific language, which serves as a customary representation of their own.

Contemporary countries comprising diverse communities are focused on establishing recognition for their religious, linguistic, and belief system ideologies on a global scale. While language teaching methods may appear straightforward, they are entangled with intricate and multifaceted issues. Innovative approaches are being implemented to address methodological challenges related to economic, familial, and administrative stances, yet the language itself remains a significant, albeit sometimes overlooked, concern.

The country's economic growth takes precedence over language issues at the broader level, but if overlooked, it can disrupt the very fabric of society at the individual level. The expanding knowledge system based on information appears to celebrate the idea of globalization, but thorough examination

reveals its negative aspects. The standardized progress in various societal sectors tends to overlook and disregard the gradual erosion of language and culture. Language policy serves as a means to position language within the social structure, where language determines access to political power and economic resources in simple terms. Language policy is a tool used by dominant groups to establish control in areas such as power, education, administration, judiciary, and social hierarchy within the country. Language policies differ from one country to another, evolving with changes in governing bodies and the level of public awareness.

The language laws that are in usage are Official Languages Act of 1963, the Official Language Rules of 1976, and various state laws which safeguard the regional languages status. There is no national language in India. There are various official languages in India at the state or reginal level. But the Indian constitution recognises Hindi in Devanagari script as official language for the purposes of the government usage. Indian parliament use both Hindi and English for the sessions and transaction. English language procured standard status in the administration and was allowed to be used in the official purposes of communication between central government and state government, parliamentary proceedings, judiciary, Higher commands, civil and administrative services.

The NEP 2020 gave importance to mother tongue and use of regional languages as the primary language of instruction as it Avoid the burden of learning a new language in children which would create room to explore other areas of knowledge or acquire different skills. Studying in their native language might install a feeling of belonging and honour in their own traditions and ancestry during elementary school. The Constitution of India's Article 350A states that every state and local authority within the state should strive to offer sufficient education in the mother tongue to children, particularly those from linguistic minority groups, at the primary education level.

Implementing NEP 2020 poses a significant challenge due to the need for a comprehensive overhaul of the current education system. The new policy demands alterations in teaching methods, curriculum, evaluation techniques, and educator preparation, necessitating substantial investments in resources and infrastructure. Executing these modifications across the expansive and varied educational environment of the country will be an intimidating endeavour.

There is also the issue of reluctance to change among different groups involved, such as teachers, administrators, and parents. Some educators are accustomed to traditional teaching methods and may hesitate to embrace the new approaches recommended by NEP 2020. Likewise, parents might be worried about how effective the new system is and how it will influence their children's future.

The problem arises when it comes to the three-language formula which partially worked for some time in the country, which included one native tongue, one national recognised language and one international language. The southern states were very furious and rebelled against the policy because Hindi being promoted as national language and they felt it as a threat to their native tongue and diminishing the sense of pride in them. There is multiplicity of the mother tongues in India. Promotion of regional languages at primary has been the underlying principle of nearly all the education policies in the past. But the problem lies in the policy itself as it does not provide the essential amenities for translation in the subject matter at commerce across the country.

Moreover, the policy gives importance to integrating technology into education, but the digital gap in India poses a significant obstacle. Limited access to technology and the internet in rural areas and among marginalized communities may impede the enforcement of NEP 2020's provisions for online learning and digital literacy. Furthermore, achieving the policy's ambitious objectives of universalizing

education, reducing dropout rates, and ensuring quality education for all may prove challenging without sufficient funding and resources. It will be necessary for the government to assign adequate funds and rally support from other stakeholders to effectively implement the policy.

The coordination and accountability of the proposed decentralization of education governance by NEP 2020 may encounter difficulties. It will require collaboration among various state governments and local bodies to ensure consistent policy implementation while allowing for flexibility to address regional needs and priorities. Additionally, addressing the shortage of qualified teachers and providing continuous professional development to equip educators with the necessary skills to implement NEP 2020's envisioned new curriculum and pedagogy poses another challenge. The effective training and continuous support of a large number of teachers will be pivotal to the policy's success.

The existing academic structures and practices pose challenges in aligning with the policy's recommendations for restructuring higher education, promoting multidisciplinary learning, and fostering innovation and research. Significant coordination and collaboration among universities, regulatory bodies, and industry stakeholders will be necessary to implement these changes. Emphasizing the importance of vocational education and skill development, the policy faces challenges in integrating these programs into the mainstream education system due to the lack of infrastructure, industry partnerships, and recognition for vocational courses. Bridging the gap between academic and vocational learning will necessitate innovative approaches and sustained efforts.

Finally, strong monitoring and evaluation mechanisms will be necessary to track the progress, identify faults and make any necessary adjustments for the implementation of NEP 2020. It will be essential to establish robust data systems and accountability frameworks to ensure that the policy's objectives are met and its impact is sustainable in the long term. Despite the great potential of NEP 2020 to revolutionize India's education system, it must confront various obstacles that must be resolved to ensure its successful execution. Conquering these obstacles will necessitate collaborative efforts from all involved parties, ongoing investments in resources and infrastructure, and a dedication to fostering innovation and continual enhancement within the education field. Through proactive management of these challenges, the government and other stakeholders can guarantee that NEP 2020 fulfils its goal of delivering high-quality education to all and equipping *students for the demands of the 21st century.*

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NEED OF ENGLISH LANGUAGE EDUCATION AND LITERACY AMONG STUDENTS

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English Language Education and Literacy refers to the process of teaching and learning English language skills, including reading, writing, speaking, listening, vocabulary development, grammar, and pronunciation. It aims to develop language proficiency, literacy skills, and cultural awareness, enabling individuals to communicate effectively, access information, participate in global communication, enhance career opportunities, and foster personal growth. English Language Education encompasses various teaching methodologies, including Communicative Language Teaching, Content and Language Integrated Learning, and Task-Based Language Learning. Literacy skills involve understanding various text types, critical thinking, and analytical skills. English Language Education is taught in primary, secondary, and higher education institutions, language schools, online platforms, and community centers, with assessment and evaluation methods including standardized tests, authentic assessments, self-assessment, and continuous feedback.

The need for English language education and literacy among students cannot be overstated. In today's globalized world, English has become the lingua franca, serving as a vital tool for communication, collaboration, and access to information. Proficiency in English enables students to participate fully in the global economy, culture, and society. Moreover, English language skills are essential for academic success, as most educational resources, research materials, and online content are available primarily in English.

English language education also enhances students' critical thinking, problem-solving, and analytical skills. It exposes them to diverse perspectives, cultures, and ideas, fostering empathy, tolerance, and global citizenship. Furthermore, English language literacy is crucial for career opportunities, as it is often a requirement for employment in multinational corporations, international organizations, and the service sector.

However, many students, particularly in developing countries, lack access to quality English language education. This can lead to significant disparities in educational outcomes, economic opportunities, and social mobility. To address this, educators and policymakers must prioritize English language education, investing in teacher training, curriculum development, and resource allocation.

Effective English language education should focus on communicative competence, integrating reading, writing, listening, and speaking skills. Technology integration, project-based learning, and authentic assessment can enhance student engagement and language acquisition. Additionally, promoting literacy through reading programs, book clubs, and library access can foster a love for reading and learning.

Ultimately, English language education and literacy are essential for empowering students to succeed in an increasingly interconnected world. By prioritizing English language education, we can equip students with the skills, knowledge, and competencies necessary to thrive in the 21st century.

Strategies for improving English language literacy:

Developing Reading Habits

Encourage students to read extensively, exposing them to various genres, authors, and topics. Implement reading programs, book clubs, and library access to foster a love for reading. Teachers can also model reading habits, discuss books, and provide guided reading activities.

Integrating Language Skills

Combine reading, writing, listening, and speaking skills to enhance language acquisition. Use authentic materials, project-based learning, and real-life scenarios to promote communicative competence. For example, students can listen to podcasts, read related articles, and engage in discussions.

1. Vocabulary Building

Teach vocabulary in context, using visual aids, flashcards, and word associations. Encourage students to keep vocabulary journals, play word games, and participate in word-building activities.

2. Writing Strategies

Emphasize writing as a process, focusing on planning, drafting, revising, and editing. Encourage journaling, creative writing, and expository writing. Provide feedback, guiding students to self-assess and improve.

3. Technology Integration

Leverage digital tools, apps, and online resources to enhance language learning. Utilize interactive websites, podcasts, videos, and language learning platforms like Duolingo, Khan Academy, and Coursera.

4. Differentiated Instruction

Tailor instruction to meet diverse learning needs, incorporating visual, auditory, and kinesthetic approaches. Use learning centers, group work, and individualized plans to cater to varying learning styles.

5. Assessment and Feedback

Regularly assess student progress, providing constructive feedback and guidance. Use standardized tests, quizzes, and project-based evaluations to monitor language proficiency.

6. Teacher Professional Development

Support teachers through training, workshops, and peer mentoring. Encourage collaboration, sharing best practices, and staying updated on language teaching methodologies.

7.Community Engagement

Involve parents, community members, and local organizations in language literacy initiatives. Organize events, workshops, and reading programs to promote language awareness and literacy.

Conclusion:

In conclusion, English language literacy is a vital component of modern education, essential for academic success, career opportunities, and global citizenship. Effective strategies for improving English language literacy include developing reading habits, integrating language skills, vocabulary building, writing strategies, technology integration, differentiated instruction, and community engagement. Teachers, policymakers, and stakeholders must prioritize English language education, investing in teacher training, curriculum development, and resource allocation. By acknowledging the importance of English language literacy and implementing evidence-based strategies, we can empower students to succeed in an increasingly interconnected world. Ultimately, fostering English language

literacy is crucial for unlocking individual potential, promoting social mobility, and cultivating a more informed, empathetic, and global-minded society.

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PROMOTING RESEARCH, INNOVATION AND EXCELLENCE FOR FUTURE EDUCATION IN INDIA

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Abstract

Education means transformation. Understanding the word is understands the world. The universities as the makers of the future cannot persist in the old patterns. The importance of higher education is for national welfare. The purpose of all education is to provide a coherent picture of the universe and an integrated way of life. Man cannot live by a mass of disconnected information. He has a passion for an ordered intellectual vision of the connections of things. The aim of education is at the development of the individual, the discovery, training and utilisation of his special talents.
In a science-based world, education and research are crucial to the entire developmental process of a country, its welfare, progress and security. It is characteristic of a world permeated by science that in some essential ways the future shape of things is unpredictable.
Many recent reports from UNESCO, the OECD, the World Bank, the World Economic Forum, and the Brookings Institution have highlighted that the. Students must develop cognitive skills & ' foundational skills' of literacy and numeracy and 'higher-order' cognitive skills such as critical thinking and problem solving skills - but also social and emotional skills, also referred to as 'soft skills', including cultural awareness and empathy, perseverance and grit, teamwork and leadership. India is a country having strong knowledge societies that attained their intellectual and material wealth in large part through science as well as art, language, and culture that enhanced and uplifted not only their own civilisations but those around the globe. If India is to become a leader in research areas, and truly achieve the potential of its vast talent pool to become a leading knowledge society in the coming years and decades, the nation will require a significant expansion of its research capabilities and output across disciplines. Research has more essential for the economic, intellectual, societal, environmental, and technological health and progress of a nation.

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Many recent reports from UNESCO, the OECD, the World Bank, the World Economic Forum, and the Brookings Institution have highlighted that the. Students must develop cognitive

skills – both ' foundational skills' of literacy and numeracy and 'higher-order' cognitive skills such as critical thinking and problem solving skills - but also social and emotional skills, also referred to as 'soft skills', including cultural awareness and empathy, perseverance and grit, teamwork and leadership

Initiatives to Promote Quality Research

Knowledge creation and research are well-known to be growing and sustaining a large and vibrant economy, uplifting society, and

continuously inspiring a nation to achieve even greater heights. India is a country having strong knowledge societies that attained their intellectual and material wealth in large part through science as well as art, language, and culture that enhanced and uplifted not only their own civilisations but those around the globe. If India is to become a leader in research areas, and truly achieve the potential of its vast talent pool to become a leading knowledge society in the coming years and decades, the nation will require a significant expansion of its research capabilities and output across disciplines. Research has more essential for the economic, intellectual, societal, environmental, and technological health and progress of a nation.

Promoting Inter-University Centres for collaborative research and teaching: As a part of the initiative to promote collaborative research, several new research-based Inter-University Centres (IUCs) in different areas will be established. The IUCs will foster interdisciplinary research and teaching in several areas, organize training programmes for researchers to enhance their research competence and increase their innovation capacity in both research and teaching. Networks will be established by creating linkages between national laboratories, national research centers and universities.

Research and teaching in the culture and history of India's neighbours country. Research and teaching in the languages, culture, and history of India's neighbours should be strongly encouraged, such as the culture and civilisation of China. Understanding and knowledge of our neighbours contributes to regional peace and mutual economic growth.

Dynamic and proactive introduction of research and teaching programmes in fields of national importance: There will be a rigorous periodic review(once every 5 years) of areas and fields of current national importance, and of emerging fields.

Access to high quality multidisciplinary libraries and online journals play a key role in liberal education and also in the performance of high quality research. The Government of India will set up a mechanism, e.g. becoming a single buyer for online access to journals for all public institutions in the country, so as to save on costs and improve access. This would replace the present practice of funding premier institutions to subscribe to journals, which will save significant cost, and enable access for students and faculty from all public institutions.

Funding for research to improve the quality. Adequate funding will be provided for research to continually improve the quality of specific pedagogy and assessments, student research participation.

The demand for enrolment in high quality MOOCs continues to increase. Presently, India enrolls the second largest number of students in MOOCs after the USA. The SWAYAM (Study Web of Active Learning for Young Aspiring Minds) platform is a recently-launched Indian platform for offering MOOCs that will be used to help individual educators

Facilitating entry of international students and researchers: The ease of entry for international students will be improved. It will make all the information available on a 'Study in India' Portal that will be set up by MHRD. It will also work with all the relevant ministries to improve processes and set transparent criteria for permissions. The visa and Foreigner Registration Regional Office (FRRO) processes, extension of stay, and internship policies will be simplified to attract high quality students from all over the world.

The newly constituted National Research Foundation(NRF) will be encouraged to support special schemes for offering research scholarships to talented international students from developing countries. Good quality credit-based short-term Indian studies courses will be offered to enable students who wish to stay for a shorter period. Students who have completed a degree in India will be allowed to seek

employment in the country for a pre-decided period of time. so that they can gather some work experience. Indian institutions hosting visiting scholars under the Global Initiative of Academic Networks (GIAN) scheme will be encouraged to provide such analogous opportunities for selected faculty from their institutions to visit foreign institutions for their research work.

Strategic partnerships between universities in India and abroad will be used to expand research collaborations. The NRF will provide funding support for the two-way movement of talented research students and post-doctoral fellows, as part of funding joint research projects. And visas, registration, extension of stay, etc., must be facilitated by their International Offices – set up to develop and deliver on an internationalisation strategy, and offer services and supports to international students – working with the newly set-up Inter-University Centre for International Education (IUCIE).

The recent data and economic studies from around the world shows that the European Union, titled 'The Economic Rationale for Public Research and innovation funding and its Impact'(2017), it was reported that: two-thirds of the economic growth of Europe from 1995 to 2007 came from research and innovation (R&I); Research and Innovation accounted for 15% of all productivity gains in Europe during the period 2000 and 2013;and that an annual increase of 0.2% of GDP in R&D investment would result in an annual increase of 1.1% in GDP - a five-fold return. Indeed, there is a clear correlation between the rates of R&I investment of developing/developed nations and various measures of their prosperity such as GDP per capita.

Unfortunately, levels of R&I investment in India have not grown but instead have steadily dropped over the last decade - from 0.84% of GDP in 2008 to around 0.69% in 2014, where it remains today, the levels of R&I investment as a proportion of GDP in some other countries are: United States (2.8%), China (2.1%), Israel (4.3%), and South Korea (4.2%); i.e. all invest at least three times as much as a proportion of GDP.

The national importance of a permeating culture of research and innovation.

The societal challenges that India needs to address today, such as access for all its citizens to clean drinking water and sanitation, quality education and healthcare, improved transportation, air quality, energy, and infrastructure, will require the implementation of approaches and solutions that are informed by top-notch science and technology and are also rooted in a deep understanding of the social sciences and humanities and the various socio-cultural dimensions of the nation. Facing and addressing these challenges will require high quality interdisciplinary research across fields that must be done in India and cannot simply be imported; the ability to conduct one's own research. Research in the arts and humanities, along with innovations in the sciences and social sciences, are therefore extremely important for the progress and enlightened nature of a nation.

But due to a lack of funding sources, both public and private, to support outstanding research and innovation initiatives remains a major issue. A related problem is the associated decline of prestige and encouragement of young people to enter research and innovation. Talented students are rarely encouraged by parents or by society to pursue their research interests in, e.g. pure science or social science. If all students were enabled and encouraged to pursue subjects that they found the most interesting and in which they had the most talent, it would be best for these students as well as best for the nation. At the current time, most students who excel at studies (regardless of their subject of interest) are generally urged towards a few restricted areas,such as engineering or medicine; a full range of individual interests must be

encouraged to help rebuild a vibrant knowledge and research culture.

Even most universities where undergraduate students study in India simply do not have the capability of seeding, managing, funding, and conducting research.

The National Research Fund will be to aim to helping to develop a culture of research in the country through suitable incentives

• Fund competitive, peer-reviewed grant proposals of all types and across all disciplines;

• Seed, grow, and facilitate research at academic institutions, particularly at universities and colleges for research and hiring excellent young research students and faculty, and strengthening and recognising existing high quality

• Act as a liason between researchers and relevant branches of government as well as industry, so that research scholars are constantly made aware of the most urgent national research issues of the day, and so that policymakers are constantly made aware of the latest research.

Existing Social Science Resources for Research Undertaken

The resources which are available for social science research in the India have a sense of crisis such as **non utility of social science** discipline; there is **downsizing of state funding** for social sciences. Some of the institutional resources available for social sciences in research in India such as Centre for Economic and Social Studies (CESS)Hyderabad, Institute for Social and Economic Change, (ISEC) Bangalore. Centre for Development Studies(CDS) Thiruvananthanpuram. and Madras Institute of Development Studies(MIDS) Chennai. The Anveshi, founded in 1985 id sn important resources centre in south India for research on gender.

Specifically South India is the home for well known for university such as Madras University was founded in 1857, Annamalai University in 1928, the University of Kerala in 1937, Osmania University in 1918 and University of Mysore in 1916. University of Hyderabad in 1974. However there is school of Social Science At **The Mahatma Gandhi University at kottayam** is to promote teaching and research in the social science. Currently the school offers a PhD programme.

Social Relevance of Scientific Research:

Universities are funded by public. It is reasonable to expect that society benefits from the results. For scientific research that it should at least have a potential societal impact. Universities and individual investigators must explicitly consider the social relevance of their research activities. We can make tow demands of research such as high scientific quality and relevant to society. University has to achieve transparency when it comes to the scientific quality and social relevance of research.

The government can take several steps to encourage research and innovations in the universities. Promotion of research in liberal arts and social sciences, including inter-disciplinary research is significant too. The government needs to increase its allocations for Rand D activities. At the institutional level, there is a need to link teaching with research. The government needs to invest in faculty development and provide incentives for research, promote collaborative efforts between institutions in research So that the research and innovation should be developed in students and faculty members, to develop research capabilities of teachers and students and research agenda should be prioritized at the higher education. The private agencies can be encouraged and motivated to invest funds in university research and innovation activities.

Liberal research grants for both social sciences and basic sciences.

Setting up Incubation Centers with Seed Money to do innovative research, Research leading to creation of intellectual property.

Setting up Research Parks in central educational institutions.

Joint appointments of faculty to enabling researchers to teach and Inter-disciplinary research. Institutions must come together for creating new knowledge at the intersections of existing disciplines. so that we make India become a favoured destination for R&D projects.

There is need to reengineering to higher education by:

- Recognizing four pillars of innovation, research, employment and entrepreneurship.
- Outcome based learning: creation of knowledge while learning.
- Stick to fundamentals and experimental learning and results
- Interdisciplinary and value added programme
- Micro specialization, post PhD programme
- Allow research and innovation programme and allow it with coursework, proof data and analysis
- Raising the firm infrastructure-
- Platform for dry and wet innovation ,Laboratories, field research
- Knowledge network to connect students to share, learn and create content.
- Develop nodal research hubs /parks for mobility and convergence.
- The infrastructure should grow and spread through affirmative action the India`s smallest town and cities.
- Develop research and innovation oriented teachers through faculty development cum research programme
- Mobility of students and faculty across the nation and international level

The `**Mission India**` Initiatives: towards transformation of research and innovations The Indian government directs research by defining 'priority areas', which are most of the research funding flows. These areas currently include climate change and nanotechnologies, as well as artificial intelligence and its application, particularly in the areas of health, agriculture, mobility, education and urbanization. Many of the best universities are responding to the imperative of making innovations more rapidly available to the society. With new research parks, National Digital Library, Research Hub, National Discovery-Innovation Programme (Avishkar Yojana), National Open Research Programme, establishment of incubators, and efforts towards closer cooperation with industry, the universities support their students, graduates, and scientists in realising ans sharing their ideas and knowledge. In the meantime, a lively and interesting ecosystem of science-based start-ups has developed here. Global Learnilng Network, thematic action oriented missions such as future of cities, science and heritage,technological intervention for food and nutrition sustaninability.

Recently, research has also played a decisive role in the internationalisation of universities. There are new state funding programmes, aimed at attracting foreign scientists to research and teaching activities at Indian universities. Joint research also plays an important role for bilaterally funded partnerships. To achieve

excellence mainly in teaching and inculcate the research culture, UGC has initiated the scheme of "Colleges with Potential for Excellence" (CPE). It has been assisting identified Universities for granting the status of University with Potential for Excellence. The UGC"s Special Assistance Program for research has been greatly expanded, providing more realistic amounts of funds to selected well established academic fields in specific programs. There are also moves to establish a system of performance measures around indicators such as degree completion, publication counts and quality. It

is need to set research priorities, and encourage the sharing of infrastructure through partnerships with corporations and universities.

Conclusion

Key challenges facing the system include quality assurance, credit transfer systems, movement between higher education and vocational skills streams and teacher training in higher education. No uniformity in PhD policy and regulation. Special Monitor and regular feedback about guide under whose guidance students are doing his research work.

• There is an urgent need for systemic change in affiliated colleges to improve the quality of teaching and learning. Lack of teaching skills in faculty and limited understanding of the learning process. The use of outdated pedagogies (input oriented, lecture-based approaches, rather than student-centred, enquiry driven and outcomes-based) , Outdated and inflexible curricula. A rigid assessment system, which encourages rote-learning and does not test students' broader skills or deeper learning. Lack of an effective quality assurance system for teaching and learning

• Private businesses are waiting impatiently to enter the higher education market. The private sector will continue to grow, but 'for-profit' higher education is unlikely to be sanctioned soon.

The current digital content and distance learning materials in India are of poor quality and that little good content is being developed at present so international collaboration is essential to raise quality. Internet connectivity and accessibility similarly teachers are poorly trained both in the effective use of use technology and in pedagogical terms

• There is currently limited collaboration with industry. Indian institutions would like to engage with industry in the development of science parks, incubation centres and technology transfer units .

There is no shortage of funding for centrally-funded 'top tier' institutions, such as the IITs, IIMs, and Institutes of National Importance. However, research budgets remain underspent due to a lack of good quality research proposals so here international collaboration can help through professional networking and specific skills such as proposal writing. Research funding is expected to increase and continue to flow towards these institutions.

• The state universities are underfunded but are optimistic that their funding will increase in the future; they will be looking for international collaboration in areas of capacity-building assistance in teaching and research, and in developing their research networks.

• International collaboration in the arts, humanities and social sciences is generally lacking and there is an anxiety about the recent neglect of these disciplines in India. As fewer students have been taking up research careers in these areas, departments have declined, meaning a vicious circle of lack of employment opportunities for researchers.

• it needs to be done that mature learners and students looking to enhance their employability and develop entrepreneurial skills to create a new markets and new requirements for HE institution and to nurture the next generation of Indian researchers, through providing: early stage research experience and international networking.

India does not have enough high quality researchers. The number of students taking PhDs and entering research posts is very low 4,500 PhDs are awarded per year in science and engineering, compared to 30,000 in China and 25,000 in the US34. There is systemic segregation of teaching and research; most teaching-focussed universities do not provide students with research experience or the skills which would prepare them for research careers. the ecosystem for innovation in Indian research institutions is weak. The causes, among others, stem from a lack of multidisciplinary working, no development for

faculty and students in areas to stimulate innovation and few links with industry. These constraints reveal themselves in the failure of Indian institutions to make their mark in the world global rankings.

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OUTSTANDING FEATURES OF NEP - 2020 FOR HIGHER EDUCATION

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Abstract

In an era where education is the cornerstone of progress, the National Education Policy (NEP) 2020 emerges as a game-changer for higher education in India. This comprehensive framework aims to revamp the educational landscape and align it with contemporary global standards. In this article, we will explore the outstanding features of NEP 2020 that promise to transform higher education into a more accessible, inclusive, and enriched experience for aspiring students. And the National Education Policy 2020 stands as a testament to India's commitment to advancing higher education. With a focus on flexibility, multilingualism, technology integration, research and inclusiveness, NEP 2020 not only aims to enhance the learning experience but also prepares students for the challenges of tomorrow.

Key Words: *National Education Policy, Higher Education, Flexibility, Multilingualism, Technology integration, Research and inclusiveness.*

Introduction

Education plays a crucial role in the development and progress of a nation. Recognizing the need for a holistic transformation in the existing education system, India has recently introduced the New Education Policy (NEP) 2020. This visionary policy aims to revamp the higher education landscape in the country, focusing on inclusivity, flexibility, and skill development. In this article, we will explore the salient features of NEP 2020 for higher education and its potential impact on students, institutions, and society as a whole.

1. Flexibility and Multidisciplinary Learning

NEP 2020 breaks away from the traditional system by offering increased flexibility in the choice of subjects and programs. Under the new policy, students can now pursue interdisciplinary education and have the freedom to select courses from various disciplines. This multidisciplinary approach encourages holistic learning and allows students to explore diverse interests. It promotes creativity, critical thinking, and problem-solving skills, preparing them for the dynamic requirements of the 21st-century workforce.

Key Points:

❖ Students can choose a major and multiple minors, acquiring knowledge and skills across different domains.
❖ The credit-based system enables seamless mobility between courses and institutions.
❖ Emphasis on vocational education and skill development to meet industry demands.

2. Integration of Technology

NEP 2020 recognizes the role of technology in transforming education and aims to integrate it effectively into the higher education system. The policy encourages the use of digital tools and platforms to enhance learning outcomes, increase access, and improve the overall educational

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experience. By leveraging online resources, virtual classrooms, and e-learning platforms, students can access education irrespective of geographical constraints. It also promotes the development of digital literacy skills, essential in the digital era.

Key Points:
- ✓ Integration of technology-enabled platforms for teaching, assessments, and learning management systems.
- ✓ Emphasis on digital infrastructure development in educational institutions.
- ✓ Facilitation of Massive Open Online Courses (MOOCs) for wider access to quality education.

3. Focus on Research and Innovation

NEP 2020 envisions the transformation of higher education institutions into hubs of research and innovation. The policy emphasizes the establishment of research centers, collaborations with industry, and the promotion of research-oriented learning. This approach nurtures a culture of curiosity, innovation, and scientific temperament among students and faculty members. It encourages original research, interdisciplinary collaboration, and the application of knowledge for societal development.

Key Points:
- ➢ Encouragement of research through funding, grants, and fellowships.
- ➢ Promotion of entrepreneurship, startups, and incubation centers in educational institutions.
- ➢ Integration of research and innovation into the curriculum across disciplines.

4. Equality and Inclusivity

NEP 2020 emphasizes the importance of equality and inclusivity in higher education. The policy aims to eliminate barriers such as gender, socio-economic status, and disabilities by providing equal opportunities to all students. It encourages the creation of a diverse and inclusive environment, fostering social cohesion and harmony. The implementation of reservation policies, scholarships, and financial support ensures that students from marginalized backgrounds have access to quality education.

Key Points:
- ♦ Implementation of affirmative action policies to promote inclusivity and diversity.
- ♦ Special provisions for students from economically disadvantaged backgrounds.
- ♦ Equal opportunities for students with disabilities and special learning needs.

5. Professional Development of Faculty

Recognizing the pivotal role of faculty members in shaping the education system, NEP 2020 prioritizes their professional development. The policy encourages continuous learning, research, and exposure for faculty, ensuring they remain updated with the latest developments in their respective fields. It promotes a student-centric approach, pedagogical training, and rewards excellence in teaching. By empowering the faculty, NEP 2020 aims to enhance the quality of education and foster a positive learning environment.

Key Points:
- ❖ Training programs for faculty members to enhance teaching methodologies and research skills.
- ❖ Emphasis on interdisciplinary collaborations and knowledge-sharing among faculty.
- ❖ Recognition and rewards for outstanding contributions to teaching and research.

6. Holistic Education: A Shift from Rote Learning

One of the fundamental changes brought about by NEP 2020 is its emphasis on holistic education. The policy encourages a shift away from traditional rote learning methods towards a more

inclusive and immersive learning experience. This inclusive approach aims to foster critical thinking, creativity, and problem-solving skills among students.

7. Integration of Vocational Education

Recognizing the significance of vocational education, NEP 2020 integrates vocational training with mainstream education. It aims to provide students with practical skills and knowledge, enhancing their employability and promoting entrepreneurship. The policy encourages universities to offer vocational courses as part of the curriculum, ensuring learners gain both theoretical and practical expertise.

8. Academic Bank of Credit

To facilitate seamless credit transfers and recognition of prior learning, NEP 2020 proposes the establishment of an Academic Bank of Credit. This innovative system allows students to accumulate credits from various institutions and make their education more flexible and portable. It offers students the freedom to learn at their own pace and access a diverse range of learning opportunities.

9. Choice of Languages

NEP 2020 promotes linguistic diversity by offering students the choice of studying in their mother tongue or regional language. This not only preserves the cultural heritage but also ensures greater inclusivity in education. It enables students to develop a strong foundation in their native language while also gaining proficiency in other languages, including English.

10. Technology Integration: Embracing the Digital Era

In alignment with the digital era, NEP 2020 encourages the seamless integration of technology in higher education. It recognizes the transformative potential of technology and aims to leverage it for enhancing teaching, learning, and assessment practices.

11. **Online and Blended Learning**

The policy promotes online and blended learning models to expand access to quality education. This approach ensures that students from remote areas and disadvantaged backgrounds are not left behind. Online resources, digital libraries, and intelligent tutoring systems are some of the technological aids that can revolutionize the learning experience and make it more interactive.

12. National Educational Technology Forum (NETF)

NEP 2020 proposes the establishment of the National Educational Technology Forum (NETF) to facilitate the exchange of ideas, best practices, and technological innovations in education. The forum brings together academia, industry experts, and policymakers to collaborate on the effective integration of technology in higher education.

13. National Research Foundation (NRF)

To catalyse research efforts, NEP 2020 proposes the creation of the National Research Foundation (NRF). The NRF will provide grants, support collaboration between academia and industry, and promote interdisciplinary research. This initiative aims to enhance the quality of research and innovation in higher educational institutions.

14. Encouraging Start-up Culture

NEP 2020 emphasizes the promotion of a startup culture in higher education institutions. It encourages the establishment of incubation centers and entrepreneurship cells to nurture innovative ideas and support startups. This focus on entrepreneurship equips students with the necessary skills to contribute to the country's economic growth and job creation.

Conclusion

The New Education Policy 2020 introduces significant changes and reforms in the higher education sector. With its emphasis on flexibility, multidisciplinary learning, integration of technology, research, equality, and faculty development, NEP 2020 aims to create a robust and inclusive educational ecosystem. By embracing these salient features, India can pave the way for a knowledge-driven society that empowers its citizens to thrive in the global arena. And focusing on holistic learning, foster creativity and critical thinking, and propel the nation towards a knowledge-driven society. It is an ambitious and progressive policy that holds the potential to transform the educational landscape and shape future generations.

Any policy's effectiveness depends on its implementation. Such implementation will require multiple initiatives and actions, which will have to be taken by multiple bodies in a synchronized and systematic manner. Therefore, the implementation of this Policy will be led by various bodies including MHRD, CABE, Union and State Governments, education-related Ministries, State Departments of Education, Boards, NTA, the regulatory bodies of school and higher education, NCERT, SCERTs, schools, and HEIs along with timelines and a plan for review, in order to ensure that the policy is implemented in its spirit and intent, through coherence in planning and synergy across all these bodies involved in education.

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"The New Education Policy 2020 provides a pathway for transforming India into a vibrant knowledge society." - Prime Minister Narendra Modi.

MULTIMEDIA RESOURCE MANAGEMENT (MRM) PROGRAMME – DIGITAL REPOSITORY FOR TEACHERS'

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Abstract

This paper focuses on some major topic related to Multimedia resource management programme – digital repository for teachers. The rapid advancement of technology is reshaping the future of education, with MRM programs playing a pivotal role in this transformation. This paper explores the significance of MRM systems as digital repositories for teachers, providing centralized access to high quality multimedia resources that enhance teaching and learning experience. In the educational context, an MRM program helps teachers find, curate and integrate multimedia content into their lessons, improving engagement and learning outcome. These programs enable educators to enhance lesson planning and delivery through interactive and diverse media formats, fostering creativity and engagement in classroom. As education moves towards a more digital future, MRM systems will emerge as key factor for teachers in enhancing learning outcome. It act as an effective digital repository for teachers. Benefits of digital repositories for teachers is also been described in this paper. Furthermore, this paper focuses on key features of an effective MRM programs, such as search tools, multimedia integration and user friendly interfaces and highlight the benefits for teachers, including time efficiency, access to updated content and improved teaching method. Integrating multimedia resources in education sector enhances learning experiences. Teachers should be well equipped in using multimedia resource in teaching-learning process. MRM program provide a good platform for teachers to manage multimedia resources like video, image and audio which allows educators to create engaging and personalized lessons while fostering collaboration across educational institution. Furthermore, the challenges of unequal access to digital tools and potential solution are also discussed in this paper. The article concludes by emphasizing the transformative role MRM programs will play in shaping the future of education, empowering teachers, and enhancing student outcomes.

Keywords: Digital Repository, Multimedia, MRM program

Introduction

Technology has revolutionized the ease of living and ease of working in every sector. A huge improvement has been seen in education sector with new technology been introduced to meet educational goals. The integration of multimedia tools in teaching and learning process has improved the quality of education. "Multimedia refers to the computer-assisted integration of text, drawings, still and moving images(videos) graphics, audio, animation, and any other media in which any type of information can be expressed, stored, communicated, and processed digitally"(GeeksforGeeks, 2023). Sethi (2005) describes multimedia education as using different kinds of media, like text, pictures, animations, videos, and sounds, to make teaching and learning more effective.As classrooms transition from traditional, paper-based methods to tech-enabled environments, the need for centralized, accessible, and flexible educational resources become paramount. In this context, Multimedia Resource Management (MRM) programs offer a significant breakthrough, particularly for teachers who are at the core of delivering knowledge. Multimedia management is the process of organizing, storing, retrieving, and distributing multimedia content. Multimedia content can include audio files, images,

videos, and interactive media. The goal of multimedia management is to ensure that these assets are easily accessible, well-organized, and used to their full potential. The MRM programme aims to streamline the process of integrating multimedia into teaching, allowing teachers to enhance their lessons with diverse and engaging digital resources. By providing access to a centralized collection of educational materials, it helps teachers avoid the time-consuming task of searching for reliable resources across different platforms. The MRM programme act as a comprehensive digital repository tailored to the needs of educators. It facilitates the storage, retrieval, and dissemination of a wide variety of multimedia teaching materials such as videos, interactive simulations, audio recording, and digital textbooks. At a time when online learning have gained great importance, especially post- pandemic, the role of such digital repositories becomes even more critical. MRM not only supports the needs of teachers in delivering lessons but also enhances their capacity for continuous professional development by providing access to diverse curated content. By providing a broad spectrum of educational materials, it encourages innovation in teaching methods, ensuring that educators are well- equipped to meet the demands of learners.This article explores the immense potential of the MRM programme, particularly its role in shaping the future of education. It will delve into how MRM serve as a digital library that simplifies resource management for teachers, improve collaboration among educators, and ultimately contributes to a more dynamic, engaging and inclusive learning environment.

Multimedia Resource Management (MRM) Programme: An Overview

What is resource management?

Resource management is a series of processes and techniques used to ensure you have all the necessary resources to complete a project or meet business objectives. It also focuses on making the most efficient use of those resources by eliminating waste for more profits and a high return on investment (Staff, 2023). Resource management becomes very crucial to effectively manage the available resources and use it suitably to meets the needs of the institution.

Multimedia resource management programme

The multimedia resource management programme is a digital system designed to manage, store, and organize a wide variety of multimedia educational resources, making them easily accessible to teachers and educators. It serve as a digital repository where educators can find, share, and use multimedia materials such as videos, images, animations, audio files, presentation, and interactive content.

Some key features of MRM program include:

1. Resource Accessibility: Teachers can access resources anytime, from any location, making it especially useful in remote and hybrid learning environments.

2. Customization: Educators can customize materials to fit the unique needs of their students or the objectives of specific lessons.

3. Collaboration and sharing: Teachers can share resources with colleagues and collaborate on curriculum development, fostering a more collaborative teaching environment.

4. Interactive learning: MRM often includes interactive resources that can engage students in dynamic, hands-on learning experiences.

Advantage of Digital Repositories for Teachers:

A digital repository is a system that stores and manages digital content, providing access to resources such as documents, images, and data in a structured manner(Clobridge, 2010). Digital repositories for teachers are platforms or systems designed to store, organize, and provide access to educational materials, including lesson plans, multimedia content, and other teaching resources. These repositories

allow teachers to easily search for and retrieve resources, collaborate with other educators, and share their own materials.

According to Astria Learning (2024), the following are some of the advantages of digital repositories:

- No physical boundaries: A user of a digital library does not need to physically visit the library; people from all over the world can access the same information as long as an Internet connection is available.
- Availability around the clock: One major advantage of digital libraries is that people can gain access to the information 24 hours a day, seven days a week, assuming proper network connectivity.
- Multiple accesses: A number of institutions and patrons can use the same resources at the same time.
- Information retrieval: The user can search the entire collection using any search term (word, phrase, title, name, and subject). Digital libraries can provide very user-friendly interfaces, with proper clickable access to their resources.
- Preservation and conservation: While digitization does not provide a long-term preservation solution for physical collections, it does provide access copies for materials that would otherwise degrade due to repeated use. One critical issue is the preservation and conservation of data in the digital library.
- Storage space: Unlike traditional libraries, which have limited storage space, digital libraries have the potential to store much more information. This is because digital information requires very little physical space to contain it, and media storage technologies are more affordable than ever before.
- Added value: Certain characteristics of objects, most notably image quality, may be enhanced. Digitization can improve legibility and eliminate visible flaws like stains and discoloration.

Impact of Multimedia Resource Management (MRM) Programme on Teaching Practice:

According to Tulsiani (2024), integrating multimedia in teaching and learning processes offers several significant benefits. These include enhanced engagement, as multimedia tools can make lessons more interactive and captivating for students. Additionally, the use of multimedia aids in improving retention, as it allows students to better understand and remember the material presented. By incorporating various forms of media, such as videos, animations, and interactive simulations, educators can create a more dynamic and effective learning environment that caters to different learning styles and keeps students actively involved in their education.

The Multimedia Resource Management (MRM) programme has the potential to significantly impact teaching practices by integrating digital tools and multimedia resources into the educational landscape. This integration enhances lesson planning, teaching delivery, and learning outcomes. Below are ten key points highlighting the impact of MRM on teaching practices:

1. Enhanced Lesson Planning

With an organized and accessible multimedia repository, teachers can streamline lesson planning by using pre-curated content such as videos, images, and interactive simulations. MRM allows teachers to quickly find and incorporate engaging materials that align with their lesson objectives, saving time and effort in resource gathering.

2. Increased Engagement and Motivation

The use of multimedia elements like animations, interactive quizzes, and videos can make lessons more dynamic and engaging for students. This keeps students motivated, as multimedia appeals to various

learning styles (visual, auditory, kinesthetic). By integrating rich media resources, teachers can enhance student participation and retention of information.

3. Support for Differentiated Instruction

MRM programmes allow teachers to tailor resources for different student needs, including advanced learners and those who may require additional support. Multimedia repositories often provide materials at various levels of difficulty, helping teachers customize lessons and address diverse learning preferences within a single classroom.

4. Collaboration Among Teachers

Digital repositories enable teachers to collaborate more effectively by sharing multimedia resources and lesson plans with one another. This fosters a collaborative teaching environment, where educators can exchange ideas, strategies, and best practices, thus improving the quality of teaching across departments or schools.

5. Encourages Innovative Teaching Methods

With easy access to multimedia tools, teachers are more likely to experiment with innovative teaching methods, such as flipped classrooms, project-based learning, or blended learning models. MRM encourages educators to move beyond traditional lecture-based teaching and explore more interactive, student-centered approaches.

6. Better Classroom Management

Incorporating multimedia resources through MRM can improve classroom management. Teachers can use interactive videos, virtual labs, or educational games to engage students productively, minimizing distractions. Structured multimedia lessons help keep students focused and involved in the learning process.

7. Professional Development and Continuous Learning

MRM programmes often come with built-in training modules and access to professional development resources, allowing teachers to stay updated on the latest trends in multimedia teaching tools. This continuous learning can help educators refine their skills in creating engaging, multimedia-rich lesson plans.

8. Access to Global Content

Through multimedia repositories, teachers can access a wealth of global educational content, such as open educational resources (OER), online lectures, and documentaries. This exposure allows educators to bring a global perspective into the classroom, enrich cultural awareness, and provide students with diverse viewpoints.

9. Integration with Other Educational Technologies

MRM can seamlessly integrate with other educational technologies, such as Learning Management Systems (LMS) and assessment tools. This integration creates a unified platform for teaching, learning, and assessment, where multimedia resources are easily accessible within the context of a broader digital learning ecosystem.

10. Improved Assessment and Feedback

Multimedia resources, such as interactive quizzes, video-based assessments, or simulations, provide new avenues for assessing student learning. Teachers can use these resources to provide immediate, formative feedback, allowing students to self-assess and improve their understanding in real time.

Role of MRM Programme in Future of Education

Multimedia is a key component in the success of online learning. This is supported by the idea that multimedia brings diversity to the learning experience, encompassing various types of content that cater to different learning preferences. The effectiveness of online learning is heightened when multimedia elements are strategically incorporated, creating an engaging and interactive educational environment (Dubey, 2024).

The Multimedia Resource Management (MRM) programme will play a pivotal role in shaping the future of education. As educational institutions increasingly adopt digital tools and multimedia, the ability to manage and effectively utilize these resources will become a critical aspect of teaching and learning. Below are ten key points discussing the role of MRM in the future of education:

1. Centralized Access to Diverse Resources

MRM programmes provide a centralized platform where teachers can access a wide range of multimedia resources, including videos, interactive simulations, and educational games. As digital learning continues to expand, having a central repository will ensure that educators can quickly find and utilize diverse materials that enhance student learning outcomes. This will be vital in a future where teachers will need to adapt to rapidly changing content and methods.

2. Bridging the Digital Divide

In the future, equitable access to high-quality educational resources will be crucial in closing the digital divide. MRM programmes can democratize education by ensuring that schools in underserved areas have access to the same high-quality digital materials as well-funded schools. This will level the playing field for students, no matter their geographic or economic background.

3. Customization of Learning Paths

The future of education is leaning towards personalized learning, where students can learn at their own pace and according to their individual needs. MRM will support this by offering customizable content tailored to different learning styles and abilities. Teachers will be able to pull resources from a vast multimedia repository to create personalized learning paths for each student, ensuring more targeted and effective education.

4. Supporting Hybrid and Blended Learning Models

With the rise of hybrid and blended learning, where students learn both in-person and online, MRM programmes will be essential for managing the digital components of the curriculum. Teachers will need to easily organize and distribute multimedia resources to both in-class and remote learners, ensuring that all students receive a cohesive and consistent learning experience. This flexibility will be a cornerstone of future education models.

5. Enhancing Teacher Professional Development

MRM programmes will not only benefit students but will also serve as an important tool for teacher professional development. By providing access to multimedia training modules, workshops, and best practices, MRM can support continuous learning for educators. In a future where the role of the teacher is evolving, professional development through MRM will ensure that teachers stay up-to-date with new technologies and instructional strategies.

6. Fostering Global Collaboration

In the future, education will become more globally connected, and MRM programmes will facilitate this by enabling teachers and students to share resources across borders. Teachers will be able to collaborate with peers worldwide, exchanging multimedia content and best practices that enrich the

educational experience. Global collaboration will help in creating a more inclusive and diverse curriculum, exposing students to different perspectives and cultures.

7. Promoting Innovative Teaching Practices

As education shifts toward more active, student-centered learning, MRM programmes will empower teachers to explore innovative teaching methods, such as project-based learning, gamification, and flipped classrooms. By providing easy access to a variety of multimedia tools, teachers can design lessons that go beyond traditional lectures and engage students in interactive, hands-on learning experiences that prepare them for the future workforce.

8. Integrating Artificial Intelligence (AI) and Data Analytics

The future of MRM will likely integrate AI and data analytics to make teaching more efficient and effective. AI-powered MRM systems can help teachers by recommending resources based on student performance, learning preferences, and classroom needs. Additionally, data analytics will allow teachers to track which multimedia resources are most effective in enhancing learning outcomes, enabling them to make data-driven decisions about their teaching strategies.

9. Sustainability and Cost-Efficiency

As schools aim to reduce their carbon footprint and manage budgets efficiently, MRM programmes will support sustainability by reducing the need for physical textbooks and materials. Digital repositories eliminate the need for printing and shipping, contributing to a more eco-friendly approach to education. Additionally, once established, MRM systems can lower costs for schools by providing reusable digital resources, reducing the need for constant purchasing of new materials.

10. Enhancing Assessment and Feedback

Future assessment practices will increasingly rely on multimedia elements, such as interactive assessments, video submissions, and simulations. MRM will play a key role in managing these types of assessments, allowing teachers to evaluate students in more dynamic and comprehensive ways. Moreover, MRM systems can be designed to facilitate immediate feedback, giving students the opportunity to improve their skills in real-time, fostering a more interactive and responsive learning environment.

Key Challenges in Implementing MRM

According to Sosnowski (2016), while multimedia can enhance the learning experience, it also presents several challenges. One major issue is the high cost of multimedia equipment and software, which can be a significant barrier for many educational institutions. Additionally, the effective use of multimedia requires teachers to have specialized training and technical skills, which not all educators possess. Another challenge is the potential for technical problems, such as hardware malfunctions or software glitches, which can disrupt the learning process.

Here are some key challenges in implementing a Multimedia Resource Management (MRM) programme:

1. Infrastructure Limitations

Many schools, especially in rural or underfunded areas, lack adequate infrastructure such as reliable internet access, sufficient digital devices, and necessary technical tools, which are critical for MRM programmes.

2. Digital Literacy

Teachers and administrators may lack the digital skills required to effectively use MRM platforms. This creates a barrier in adopting and utilizing digital repositories to their full potential.

3. High Initial Costs

Implementing an MRM programme involves substantial initial investment in purchasing software, devices, storage solutions, and securing training for educators and technical support staff.

4. Content Quality and Standardization

Ensuring that the resources available in the repository meet educational standards and are curriculum-aligned can be difficult. Without standardized content curation, the quality and relevance of the resources might vary.

5. Resistance to Change

Educators who are more comfortable with traditional teaching methods may resist adopting new digital tools. Shifting the mindset toward embracing technology as a teaching aid is a common challenge.

6. Data Security and Privacy Concerns

Managing sensitive information such as student data and proprietary educational content poses privacy and security risks. Implementing robust cybersecurity protocols is essential to prevent breaches.

7. Ongoing Maintenance and Updates

MRM systems require regular updates and maintenance to ensure they function effectively. Without dedicated IT support, the system may become obsolete, reducing its long-term utility.

8. Access to Technical Support

Teachers and staff need continuous technical support for troubleshooting issues related to the platform. Limited access to such support may lead to inefficient usage or underutilization of the system.

9. Content Overload

An overabundance of multimedia resources can overwhelm teachers, making it difficult to find high-quality, relevant materials. Effective organization and filtering within the MRM platform are necessary to prevent content overload.

10. Sustainability of the System

Ensuring the long-term sustainability of the MRM programme requires ongoing investment and commitment from educational institutions. Without consistent funding and technical updates, the system may become less effective over time.

Addressing these challenges will be critical to successfully implementing and sustaining MRM programmes in educational settings.

Conclusion

In conclusion, the Multimedia Resource Management programme aims to revolutionize the way educators interact with teaching materials and how students engage with learning. In a generation where education is rapidly moving towards digital platforms, MRM programmes serve as a bridge between traditional teaching methods and modern, technology-driven approaches. It offers a centralized repository for multimedia resources ranging from videos and simulations to interactive learning tools. Digital libraries and repositories are of immense help to teachers, providing a wealth of educational resources available in different forms. This paper has provided a comprehensive view of the MRM programme and its role in future of education. Looking to the future, the role of MRM in education is clear. As schools and educational institutions continue to integrate digital learning, the need for organized, accessible, and reliable multimedia resources will only grow. While there are challenges in implementing MRM- such as infrastructure limitations, digital literacy, and maintenance- its long-term benefits far outweigh these obstacles. The MRM programme provides a dynamic solution to many of the issues facing modern education. It supports not only teachers in their professional development and

daily classroom activities but also benefits students by making learning more engaging, interactive, and accessible.

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ETHNOBOTANICAL STUDY ON HERBAL PLANTS IN WESTERN GHATS OF ARALAM WILDLIFE REGION, KERALA, INDIA"

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Abstract

Ethnobotany is a discipline of research that looks at how human civilizations interact with the plant kingdom, particularly how native people perceive, manage, and use the plants nearby. A strategy to preserve oral traditional knowledge and make it accessible to current and future generations is through ethnobotanical documentation, which also gives people a chance to reflect on the biodiversity conservation status in their ancestral lands. Understanding how indigenous societies use local plants for medical purposes or other purposes is crucial for encouraging community healthcare initiatives, understanding how biological resources are traditionally used, and creating cutting-edge plant-based medications. The survey was conducted in Aralam wildlife sanctuary region, in Kerala's Kannur district. During the month of January –June 2023. The medicinal plants were collected from the forest boundaries of aralam wildlife sanctuary of Kannur district. Questionnaires were utilised to collect the data for this documentation, which was done through the collection of medicinal herbs. The tribal (paniya tribals) people developed the use of medicinal plants for the treatment of illnesses thousands of years ago. Ag devi prasad and tb shyma are two examples of the various plant or animal ingredients that many tribal groups employ to make medicinal medicines. After decades of use, it was discovered through the study that tribal communities still use native medicines for a variety of diseases. They gather the plants from their environment and habitat and use various components of them to make medicinal remedies. One plant is utilised in a variety of ways to treat various ailments. In this ethnobotanical investigation, 57 wild plants from 36 different families were identified to have medicinal benefit. The study concentrated on identifying wild plants, their habits, applications for medicine and food, as well as how they were prepared. The most prevalent plant families were Fabaceae and Asteraceae. The most often used plant component is its leaves. Some plants are primarily used for treating certain illnesses, such as wound healing, toxic bites, cancer, female disorders, diabetes, kidney stones, migraines, eye conditions, skin conditions, and hair issues. Six plants from the research area's red-listed plant list were found

INTRODUCTION

The scientific field of ethnobotany investigates how people interact with plants. With the aid of local's traditional knowledge and culture, it primarily focuses on the study of a region's flora and practical knowledge of those plants. It is a division of botany that has existed for a very long period. John William Harshberger first introduced the term "ethnobotany" to denote the study of plants used by local inhabitants of a certain region in 1895. The systematic investigation of the interaction between people and plants is known as ethnobotany. Indian medicinal plants and their customary usage are studied in medical ethnobotany [1]. Plants have been utilised for thousands of years throughout the Indian subcontinent to treat illness and maintain health, and they continue to be vital components of folk medicine and millions of people's diets today. In addition to using current medical knowledge, Indians nowadays use plants for both primary medical care (mostly in rural and underserved areas) and as a complementary form of treatment [2,3]. 70% of rural Indians are thought to employ traditional plant-based medicines for their primary healthcare need. This reliance on plant-based medicines is in

line with trends that are frequently seen in the developing world, where between 65% and 80% of people utilise plant-based medicines.

The value of ethnobotany is immense. Ethnobotany gives information on how plants have traditionally been used, and this information can be used to advance cultures. The study of ethnobotany enlightens us about lesser-known but valuable plants and aids in our comprehension of several already-familiar plants' novel applications. According to the WHO, 70 to 95 percent of people live in developing countries [6]. For the most part, they relied on conventional medications for basic medical needs. Approximately 53,000 plant species are utilised traditionally, and medications made from these plants are now used all over the world. In order to protect their health, Indian civilisation revered medicinal plants and used them in a variety of ways. Approximately 400,000 recognised traditional healers who practise Ayurveda, Unani, and Siddha are active in India today[5,7]. The use of plants is now significant in aromatherapy, homoeopathy, allopathy, and herbal medicine. For both individual and communal health, these medicinal plants are crucial. It has physiologically active ingredients that have long been utilised in conventional medicine to treat a variety of illnesses. Human bacterial and fungal infections are successfully treated with the medicinal plant material. The current study has been under-performed based on the aforementioned factor [8].

MATERIALS AND METHODS:

Description of study area:

The study area was situated in Kannur district, Kerala.TheAralam Wildlife Sanctuary is located in Kerala, southwest India, and is its most northern wildlife sanctuary. It is situated on the western side of the Western Ghats and has an area of 55 km2 (21 sq mi). It was founded in 1984, and Iritty is where its offices are located [10]. The Aralam Wildlife Sanctuary is located in the district of Kannur's southeast. It is located between 75° 47′ and 75° 57′ east longitude and 11° 54′ and 11° 59′ north latitude.

The Aralam Wildlife Sanctuary's environment displays elevations from 50 metres to 1145 metres. The highest peak in this area is Katti Betta, which rises more than 1000 metres above sea level. River Aralam is one of many streams and rivers that fill the sanctuary.

The sanctuary is situated on the northwest slopes of the Western Ghats, adjacent to the forests of the Coorg (Kodagu) district of the Indian state of Karnataka, and is located in the revenue villages of Aralam, Kelakam, and Kottiyoor [11,12].
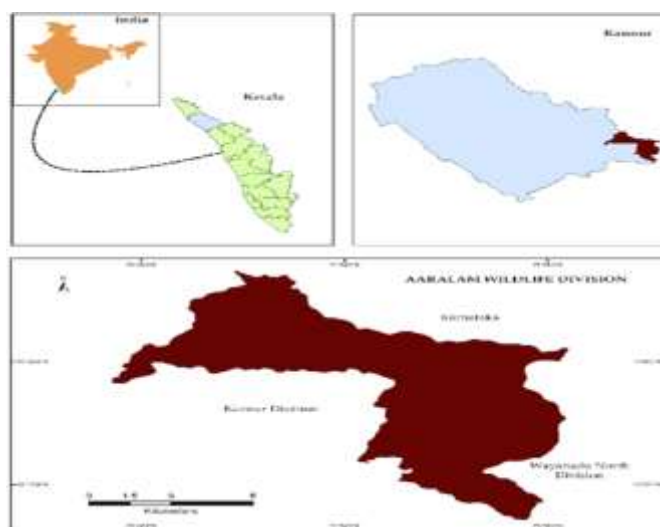
Fig 1: Map of study area

Field work

The present ethnobotanical survey of medicinal plants in the western Ghats of aralam wildlife sanctuary region was carried out in the month of January - June. In this study, data is collected

Using Personal observation and interviews with the tribal people (paniya tribals). Information is gathered after being verified by two or more individuals. The binomial name, family name, local name, plant parts used, disease treated, medicinal preparation of each plant are listed. Also collected photographs of each medicinal plants and label with name by using photo voucher method (funk et al. 2017) [16]. The local names of plants are recorded from the field and have been confirmed at least twice with various Persons. With the assistance of the local population and herbalists, all the data for the Aralam Wildlife Sanctuary region are gathered using the direct questionnaire method [12].

A total of 26 people between the ages of 30 and 60 were questioned more than once, and data were gathered from them. IUCN 2023 red list of medicinal plants is used to confirm the conservation status of the plant.

Fig.2   Tribal people from the study area

Fig.3 medicinal plant collector

RESULTS & DISCUSSION

The survey of medicinal plants was conducted using 50 species plants belonging to 33 families. Medicinal plants their scientific name, local name, habit; part of the plant used and medicinal preparation is mentioned in table 1 in the month of January –June.

In these listed plants family Fabaceae has high number and other family are Asteraceae, amaranthaceae, apocyanaceae, lamiaceae, acanthaceae, malvaceae, rubiaceae, euphorbiaceae, poaceae, convolvulaceae. Habit of plant used are herbs (25), shrubs (12), tree (6), climber (3) and slender (1). Parts of the plant used for medicinal preparation are root, bark, leaves, tuber, stem, fruit, seed, flower, whole plant [17]. A single plant is used for more than two diseases, for example achyaranthhes is used to treat wound healing improves digestion and stomach problems. Leaves are the most used plant part for medicinal preparation. Data was collected directly from locals regarding the applications, preparation, and delivery method of fifty different plants. through the interviewing of eight Elders and two herbalists from the interviews, it was clear that the villagers valued and heavily relied on their traditional wisdom, but it was also clear that this knowledge was in danger. Throughout the interviews, the experiences of the locals were noted [18]. The field survey findings are shown below, with the names of the participants' families listed alphabetically. The English and Malayalam vernacular names, botanical and family names, life form, part(s) used, preparation and administration, traditional medicinal purposes, significant chemical substances, and user values are provided for each species [19]. In this documentation some species comes under IUCN red list, they are listed in **table 2.**

The photo voucher of the documented plants and survey site are given bellow;
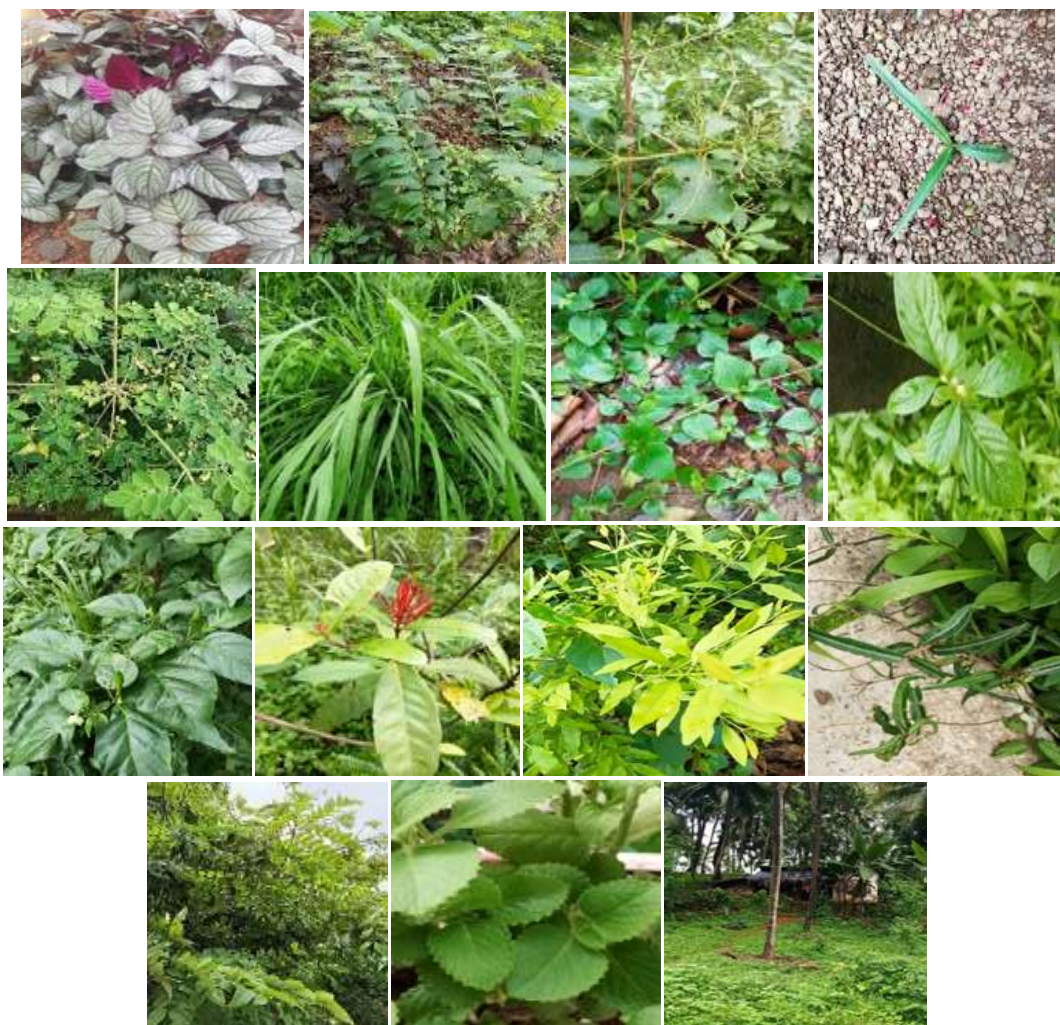
Sl. no	Binomial name	Family	Local name	Parts used	habit	Disease treated	Medicinal preparation
1	*Adhatodavas ica L.*	Acanthac eae	Adalodaka m	leaves	Shru b	Cough, sore throat, inflammation, wheezing	Decoction of leaves
2	*Alternanthar asesssilis*	Amaranth aceae	Ponnamka nni	Leaves,s tem,root	Herb	Intestinal cramps, diarrhoea and dysentery, menstrual disorder	Juice of the plant and mixed with corn flour and baked,
3	*Amorphopha llus commutatus*	Araceae	Kattuchen a	fruit	Herb	Scabies, bacterial infection	Paste of tuber is applied on the affected area

4	*Anacardium occidentale L.*	anacadiac eae	Kashumav u	Leaves, fruit, bark	Tree	Diabetes, snake bite,	Infusion of bark, juice of cashew
5	*Azadirachta indica A.*	Meliacea e	Ariyavepp u	Seed, Leaves, bark	Tree	Skin ulcers,skin disease, stomach upset, pain, fever	Decoction of leaves, paste of leaves, juice mixed with honey
6	*Biophytumse nsitivum*	oxalidace ae	Mukkutti	Seed, leaves, bark	Herb	Cough, asthma	Whole plant is granted and mixed with honey
7	*Asparagus recemosus*	asparagac eae	shathavari	Whole plant	herb	Menstrual problems, white discharge	Juice of the whole plant, paste of the tuber
8	*Boerhaaviad iffusa L*	Nyctagin aceae	Thazhutha ma	Whole plant	Herb	Jaundice, dysentery	The boiled roots applied to ulcer, decoction of plant
9	*Calotropis gigantea*	Apocynac eae	Erukku	Whole plant	Shru b	Chest Colds,	Juice of leaves
10	*Cassia fistula L.*	Fabaceae	kanikkonn a	Stem, leaves, bark	Tree	Skin disease	Bark and leaves paste applied to the affected area
11	*Cassia tora*	Fabaceae	Thakara	Leaves, seeds, root	Herb	Snake bite, skin disease	Roasted seads, paste of leaves applied to the affected area
12	*Chromolaen a odorata*	Asteracea e	Communis t pacha	Root, leaves	Shru b	Cleansing of blood, wounds,	Infusion of leaves and root
13	*Cyathillum cinereum*	Asteracea e	poovamku runnila	Whole plant	Herb	Swelling, inflammation, stomach disorder	Decoction of whole plant, seed paste mixed with lemon
14	*Cycleapeltat a*	Menisper maceae	padathali	Whole plant	climb er	Skin disease	Paste of whole plant applied to skin
15	*Cynadondact ylon L*	poaceae	karukapull u	Leaves	Herb	Fever, stomach pain	Decoction of whole plant
16	*Cyperus mindorensis*	cyperacea e	Muthanga	Tubes, seed	Herb	Skin disease	Paste of the whole plant applied to skin
17	*Desmodiumt riflorum*	Fabaceae	Nilampara nda	Leaves, root	Herb	Skin disease, stomach disease	Decoction of leaves, paste of whole plant applied to wounds
18	*Ecliptaprostr ata*	Asteracea e	kayyonni	Whole plant	Herb	Hair growth, dandruff	Whole plant paste used to make hair oil and applied to scalp
19	*Euphrobiahi rta L.*	Euphorbi aceae	Murikootti	Leaves, stem	Herb	Skin disease, wounds	Paste of the leaves applied to skin
20	*Ixora finlaysonian a*	Rubiacea e	Vellathetc hi	leaves	Shru b	Skin disease	Paste of leaves and flower applied to skin

21	*Lantana camara L.*	Verbenaceae	Aripoovu	Whole plant	Shrub	Cough, fever	Decoction of whole plant
22	*Curcuma aeruginosa*	zingiberaceae	karimanjal	tuber	Herb	Fever, skin problem	Tuber paste applied to skin
23	*Leucas aspera*	Lamiaceae.	Thumba	Whole plant	Herb	Fever, cough, cold, wheezing	Juice of the plant
24	*Melastomam alabathricum L.*	Melastomataceae.	Athirani	leaves	Shrub	Fever, chills, cough	Decoction of leaves
25	*Mimosa pudica L.*	Fabaceae.	Thottavadi	Root, leaves	Herb	Asthma, inflammation, wounds,	Decoction of roots, paste of leaves
26	*Mitracarpus hirtus*	Rubiaceae.	Thaval	leaves	Herb	ulcer	Died leaves taken in empty stomach
27	*Ocimum sanctum L.*	laminaceae	thulasi	Whole plant	Herb	Headache, fever, infection	Decoction of leaves, paste of leaves
28	*Phyllanthus niruri L.*	phyllantaceae	kezharnelli	Whole plant	Herb	Jaundice, cough, skin disease	Decoction of the whole plant, paste of the leaves
29	*Coleus zeylanicus*	Lamiaceae	Chumakoorka / iruveli	Leaves	Herb	Cough, wheezing	Infusion of the leaves
30	*Plectranthus ambionicus*	Lamiaceae	Panikoorka	Whole plant	Herb	Fever, cold, asthma, menstrual cramps	Infusion of leaves, juice made into syrup
31	*Psidium guajava L.*	myrtaceaa	pera	leaves	Tree	Menstrual cramps diabetes	Leaves extract, and guava fruit taken in empty stomach
32	*Pueraria phaseoloides*	Fabaceae	Thottapayar	Root, fruit	Climber	Ulcers, boils	Decoction of root and fruit
33	*Rauvolfia serpentina*	Apocynaceae.	Sarpagandhi	Leaves, root	Shrub	Remove opacities of cornea, wound and itching, snake bite	Juice of leaves, paste of roots and leaves
34	*Scoparia dulcis L.*	Plantaginaceae.	kallurukki	Whole plant	Herb	Cough,cold,skin problems, diabetes kidney stone	Decoction of whole plant
35	*Synedrellano diflora*	asteraceae	Mudianpacha	Leaves, root	Herb	inflammation	Paste of leaves
36	*Sida acuta*	malvaceae	anakurumthotty	Root, leaves	Shrub	indigestion	Juice of leaves and root
37	*Sida cordifolia*	malvaceae	kurumthotty	Whole plant	Root	arthritis	juice of the root

38	*Solanum torvum*	Solanaceae	chundakka	Fruit, leaves	Shrub	Fever, cough, asthma,	Juice of the leaves, dried and gaited fruit
39	*Moringa oleifera*	moringaceae	muringa	Leaves, fruit,	Tree	Skin disease, stomach disease, reproductive disorder	Powder of dried leaves, decoction of leaves, fruit made into soup
40	*Capsicum frutescens*	Solanaceae	kandari	Root,fruit, leaves	Shrub	Digestive disorder, diabetes, cholesterol	Decoction of rootand leaveseatfruit empty stomach,
41	*Tragiainvolucrata.*	Euphorbiaceous	choriyanam	leaves	Herb	eczema	Paste of the plant applied to the skin
42	*Curculigoorchioids*	Hypoxidaceae	nilapana	Leaves, tuber	Herb	Stomach disease	Paste of tuber
43	*Elephantopus scaber*	Asteraceae	anachuvadi	Leaves, root	Herb	Diabetes, cholesterol, ulcer	Decoction of root and leaves
44	*Ixora coccinea*	rubiaceae	chethi	Flower, root,leaves, stem	Shrub	Dysentery, ulcer	Infusion of leaves, decoction of flower and root
45	*Santalum album*	santalaceae	chadhanam	Leaves,stem, flower	Tree	Skin disease, stomach disease	Paste of the stem is applied to skin, decoction of leaves and flower
46	*Indian sarsaparilla*	apocynaceae	Nannari	root	Slender	Stomach disease	decoction of root
47	*Physalis angulata*	Solanaceae	Njotta njodian	Fruit	Shrub	Stomach disease	Edible fruit can be eaten row
48	*Cissus guadrangularis*	vitaceae	Changalam paranda	Whole plant	Climber	Heal broken bones, injured ligaments, tendons	Paste of the whole plant
49	*Sesbania grandiflora*	fabaceae	Agathicheera	leaves	Shrub	Skin disease	Paste of the leaves applied to skin
50	*Curcuma angustifolia*	zingiberaceae	kuva	tuber	Herb	Dysentery, stomach disease	Decoction of dried powdered tuber
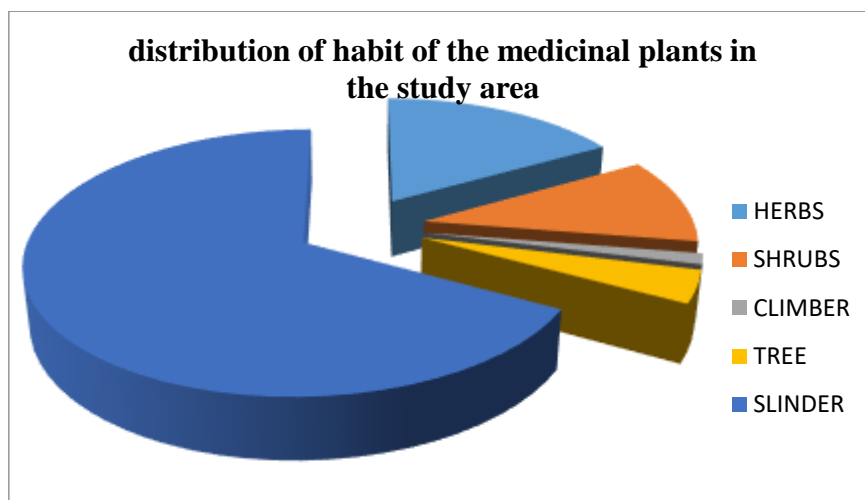
Fig. Diagram of habit distribution in the study area.

Table 2. of red listed plants:

SPECIES	STATUS
Rauvolfia serpentina	endangered
Commelina boughalensis	Least concern
Biophytum sensitivam	Least concern
Crotaloria pollida aiton.	Least concern
Ipomoea hederifolia	threatened

SUMMARY AND CONCLUSION

The study carried out in aralam wildlife sanctuary region has documented 50 plant species belonging to 33 families. The survey is playing an important role in the knowledge of medicinal plants that are used for curing various diseases. The results show that locals are still heavily reliant on medicinal plants to treat a variety of illnesses and still have a deep understanding of these plants. Elders and healthcare professionals (vaidyan) hold the majority of the traditional knowledge, although the younger generation is not particularly interested in herbal remedies. The medicinal flora in the area is declining due to lack of interest as well as factors like overgrazing, deforestation, and soil erosion, and strategies for resource conservation as well as additional ethnobotanical and pharmacological research are strongly advised for the preservation of this priceless treasure. Some plants are categorized in RED list. These plants need urgent conservation. It is therefore important to understand the need for conservation and to propagate and nurture it. Conservation of these medicinal plants are benefits for future generations for further studies and the plants play an important role in the development of human cultures around the whole world.

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NEP 2020: CHALLENGES AND OPPORTUNITIES IN FUTURE EDUCATION

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Abstract

The greatest instrument at our disposal for maximizing the interplay of democracy, diversity, and justice is education. In the absence of variety, democracy may be exclusive. Without democracy, diversity may be flimsy. Furthermore, justice cannot be attained without democracy and tolerance for differences. However, there's still much work to be done before education can fulfill its potential—the Challenges we face today and in the future call for teamwork. Governments by themselves are unable to resolve them. Rather, we must empower and inspire everyone to take part in bringing about change. Unfortunately, education in the world today is facing difficulties for these uses. Urgently needed is a fundamental overhaul of education. CAN YOU VISUALIZE TRANSFORMATION? Transformation refers to significant adjustments made to global educational offerings and procedures. This is not so much a total overturning. We shall require significantly different services from education than we have received in the past. However, a new approach must be taken to complete this transition, as compared to the past. More inclusive engagement and a stronger public discourse are required, focusing on those whose voices, cultures, and knowledge have been marginalized and excluded.

Keywords: *Democracy, Diversity, Justice, Transformation, Global Education, Inclusive.*

Introduction: Technology breakthroughs, shifting student demands, and changes in pedagogical techniques are all contributing to the fast evolution of the educational landscape. This descriptive study investigates the innovations and new trends along with the challenges and opportunities in teaching and learning as they relate to the future of education. It talks about how the educational landscape is being affected by digital technology, individualized learning, multidisciplinary methods, and international collaboration. The study also looks at the promise of inclusive and egalitarian education, the significance of developing 21st-century skills, and the role of educators as learning facilitators. Teachers may design dynamic, captivating, and transforming learning experiences that equip students for success in an increasingly complicated and interconnected world by embracing these trends and advances.

We live in a period of fast cultural and technological development, which has ushered us into the so-called "information society." These alterations give rise to fresh requests for education. Education systems must adapt their administration, structures, and orientations to meet these challenges. Thus, as a result of pressure from the shifting circumstances, reforms and adjustments take place that frequently face criticism. The Delors Report asserts in its recommendations that education institutions must adapt to the many difficulties posed by the digital society to maintain knowledge enrichment and civic exercises that meet modern needs. It says that everyone should have access to information in an information society and be taught the skills necessary to choose, organize, manage, and apply it. There is a growing need for better educational services that adapt to societal changes and meet individuals' future requirements so they may fully engage in the information society is growing. Education must be more grounded in the real world, encourage greater democratic engagement, and foster the idea of an educational community with comprehensive schools that meet the needs of all students. It must pay close attention to student and teacher performance, to all available data, and insist on openness in all aspects of school operations.

OPPORTUNITIES OF NEP-2020 in future education.

A comprehensive framework called the National Education Policy (NEP) 2020 seeks to revolutionize India's educational system. It offers instructors, students, and educational institutions several options. The following are some of the main opportunities that NEP 2020 offers:

1. Holistic and interdisciplinary education: NEP 2020 promotes a multidisciplinary approach to education, giving students the chance to acquire a broad variety of knowledge and abilities. This will help them develop into well-rounded people and get them ready for the challenging issues of the twenty-first century.

2. Skill development: A key component of NEP 2020 is the development of soft skills including communication, creativity, problem-solving, and critical thinking. Students will benefit from this by becoming more employable and better prepared to thrive in a world that is changing quickly.

3. Freedom and choice: Students have more options and freedom with NEP 2020 regarding what they can learn, how they can learn, and when they can study it. Students will be able to customize their education to fit their unique needs and interests thanks to this.

4. Technology integration: NEP 2020 encourages the use of technology in education at all levels of instruction while acknowledging its significance. This will support ongoing communication between educators and learners as well as creative and inventive learning opportunities.

5. Quality improvement: Through the introduction of new standards, oversight procedures, and accreditation frameworks, NEP 2020 seeks to raise the general caliber of education in India. This will guarantee that educational establishments offer top-notch instruction and that learners have the greatest learning opportunities. India's education system is to be revolutionized under the comprehensive National Education Policy 2020 (NEP-2020). Although the strategy offers many advantages, several issues also need to be resolved.

Among NEP-2020's difficulties are:

1. Implementation: Putting NEP-2020 into practice is going to be one of the main obstacles. The policy's implementation calls for a substantial infrastructure investment and includes a wide variety of topics. All parties involved in the policy's implementation, including the federal and state governments, academic institutions, and the corporate sector, must work together to ensure its success.

2. Funding: The NEP-2020 implementation calls for a substantial amount of money, yet the policy paper is vague about how that money is to be obtained. The policy states,

3. Language policy: A three-language formula put out by NEP-2020 has caused controversy in a few states. There is fear that the approach would force a certain language on people and erode the nation's linguistic variety.

4. Teacher development: Although the policy highlights the importance of teacher development, there are several obstacles to overcome in its implementation. To adapt to the evolving demands of the educational system, the current system of teacher education must be redesigned.

5. Assessment system: The policy suggests a fresh approach to evaluation that centers on the student's overall growth. The new evaluation system's implementation, particularly in rural regions with limited resources, is feared to provide difficulties.

6. Inclusion: The guidelines for Education must be more grounded in the real world, encourage greater democratic engagement, and foster the idea of an educational community with complete institutions that meet the requirements of a diverse student body. Schools must be cognizant of the needs, traits, and preferences of the community. In turn, society needs to be informed about the caliber of education it receives, learning outcomes, and the information, skills, and engagement opportunities that schools

provide. It must demand openness in school operations, pay close attention to public information, and evaluate the effectiveness of educators and students. It is vital to update the conventional organizational paradigm, which views schools as locked off to the outside world, to satisfy these new expectations. Fostering independent, democratic schools that are integrated into both the local and global communities is a challenge.

Teachers labor in institutional situations nearly all the time. The standards set for their admission and future professional growth, together with the demands placed on them, their chances for involvement, compensation, and other incentives, all have an impact on teachers' potential and ultimately define the makeup and traits of the teaching profession as a whole as well as how they affect student outcomes. The issue of teachers' independence or autonomy in carrying out their duties in the classroom must also be taken into account. The region's governments' efforts to promote improvements in school administration and structure have a significant impact on teachers' individuality. Think of ways to make teacher groups stronger. The difficulty lies in creating schools that are democratic, flexible, autonomous, and connected to the local and global context. This will strengthen the idea of "teaching teams" and dispel the notion of "the" teacher as someone who can bring all the skills required for a school's development together. Therefore, the necessary adjustments must be made in schools as well as in classrooms. Seeking better teacher performance is necessary from both an individual and a group perspective. This dimension aims to address every facet that helps us define people who study and practice teaching, including their traits, living situations, initial and ongoing training, and social and professional development. From a global viewpoint, the most crucial aspects of teaching should be identified by analyzing the activity's economic significance, employment structure, and labor behavior. Asking questions about living and family dynamics, working conditions (including having several jobs), household income, and the percentage of total income that comes from teaching wages are all part of creating a teacher profile. These details are then compared to revenues from other sources. Pay will determine access to professional development opportunities as well as the study of consumption habits (including cultural and technology products). The initial instruction that instructors receive. The way labor is distributed, the number of hours worked each week, and the tasks involved should all be considered in the examination of working conditions for teachers. The structure of institutions is significantly impacted by this. It is impossible to make a direct comparison between a teaching assignment that is only focused on classroom work and one that also allows time for professional development, test correction, and classroom preparation. Teachers find it difficult to actively engage in school life and to foster a sense of belonging when their teaching duties are broken up into class hours, a technique that is typical in many institutions, including secondary school education in certain nations. Furthermore, this condition poses significant challenges for the nations in the area when it comes to gathering statistics on instructors. As a result, they will need to look for workable alternatives that can result in improved collection of data that have a direct impact on the construction of teacher indicators. One needs to inquire about the organization of human resources within schools, both in vertical organizations the distribution of levels of authority and responsibility, including processes of delegation and participation, as well as horizontal organization for task execution (curricular organization, working in teams, creation of groups).

We are living in a unique time in history, where trajectories are becoming more complex and unclear at an unprecedented rate. Education systems must change in response to these ecological, social, and technological developments. However, the most transformative power to create equitable and

sustainable futures lies in education. To reinvent education, UNESCO creates concepts, sparks discussion in the public sphere, and motivates study and action. The goal of this effort is to create a new social compact for education that is based on the values of social justice, human rights, dignity, and cultural variety. It categorically states that education is a public endeavor and a good for all.

Futures of Education initiative. The International Commission on the Futures of Education was established by UNESCO in 2019 to reimagine how knowledge and learning can shape the future of humanity and the planet. The initiative incorporates extensive public and expert engagement and aims to catalyze a global debate on how education needs to be rethought in a world of increasing complexity, uncertainty, and fragility.

collaborative profession to develop people's moral, intellectual, and social skills to work together to alter the world with empathy and compassion.

Ensure more fair collaboration both inside and across nations to strengthen education as a global common good. It is becoming more and more obvious that there must be a bigger global common responsibility for education if we are to overcome historical injustices and change the future. These days, education transcends national boundaries. To effectively steward education as a global common good, we must consider restitution for the obvious disparities that have been allowed and established in our world in addition to charity and aid

The main participants in the learning process are the students. However, kids need exciting environments that instructors and schools can provide, as well as skilled facilitators. Consequently, the response to the query, "What do teachers do?" is interpreted as the outcome of these individuals (who are they?) attributes interacting with a certain institutional setting (in what context?). It is feasible to examine the reasoning behind reciprocal adjustments and decisions since practices and context both influence the traits of teachers, their behaviours, and the situation. It should be noted that teacher activities are essential to achieving educational goals because they rely, among other things, on their working and career circumstances (the institutional context); the initial and in-service training they receive (the concept of continual training); and the It is vital to research individuals who opt for a career in teaching, investigate their reasons for doing so, the training they get, and the influence this has on their later professional performance to fully analyze the many facets of their professional activities. Opportunities for in-service training, the consistency and relevance of such training, and an evaluation of its effect on their classroom work should all be taken into account. Additionally, the cultural backgrounds, personal and family expectations, professional growth paths, and other characteristics of each teacher play a role in determining how they execute their duties in terms of the resources at their disposal, their level of satisfaction, and their perceptions of the institutional framework, their responsibilities, and the learning objectives of their students.

Towards more equal educational futures This is what our educational system has to encourage. It has to foster the social goals of living together and working together, for the common good. It has to prepare our young people to play a dynamic and constructive part in the development of a society in which all members share fairly in the good or bad fortune of the group, and in which progress is measured in terms of human well-being, not prestige buildings, cars, or other such things, whether privately or publicly owned. Our education must therefore inculcate a sense of commitment to the total community, and help the pupils to accept the values appropriate to our kind of future.

Following are the challenges in front of higher educational institutions while implementing National Education Policy 2020.

1. Gross Enrolment Ratio [GER] :
2. Inclusion & Equity: National Education Policy, (NEP)2020
3. Quality benchmark
4. Infrastructural facilities:
5. Effective and visionary leadership in HEIs
6. Lack of funds
7. Capacity building, training, retraining, and untraining to faculty:
8. Faculty recruitment & promotions
9. Mindset of students towards education
10. Dependence on ICT:
11. Huge number of colleges:
12. . Internationalization & foreign universities:

Incomplete and inequitable expansion of education the challenges are listed below:

- Persistent poverty and rising inequality
- A web of exclusions
- The effects of climate change on education
- The digital that connects and divides
- Digital knowledge and its exclusion
- Hacking human learners
- Democratic backsliding and growing polarization
- The uncertain in future of work
- Education, skills development, and the school-to-work transitions
- The changing future of credentials
- Structural transformation of the labour market
- Pedagogies of cooperation and solidarity
- Interdisciplinary problem-oriented collaborative learning
- Learning to unlearn divisiveness
- Learning to heal the wounds of injustice
- Strengthening meaningful assessment
- Supporting the foundations of early childhood
- Collaborative education for all children
- Propelling the potential of adolescents and youth

Personalized learning experiences, higher academic results, and more student engagement are among the potential benefits of educational technology. However, integrating educational technology also brings with it several difficulties for teachers, institutions, and legislators. These difficulties include infrastructural constraints and compatibility problems that arise from technology, as well as stakeholder reluctance to change who are used to traditional teaching approaches. Furthermore, due to socioeconomic differences or a lack of support, certain students may not have equal opportunity to benefit from instructional technology, raising questions about equality and access. Despite these obstacles, the incorporation of offers numerous opportunities to enhance teaching and learning experiences through instructional technology. Technological Barriers and Infrastructure Challenges: The efficient use of instructional technology in schools might be hampered by a lack of access to

dependable internet connectivity, obsolete software, and inadequate hardware. To overcome technical obstacles, funds must be allocated for infrastructure upgrades, enough devices for students, and fair access to digital resources.

Data Security and Privacy Concerns: The security and privacy of student data are issues that are brought up by the use of technology in education. Schools are required to make sure that data privacy laws are followed and to take precautions against sensitive data being misused or accessed without authorization. To foster confidence among stakeholders, it is imperative to establish unambiguous rules, processes, and protections for data privacy and security.

Conclusion

Technological interventions should be humble and curious about those they claim to be serving and involve affected actors in defining the contours of problems and the acceptable range of solutions. A new technological paradigm that remains in constant relationship with democratic values and inclusive, participatory practices will best serve our intertwined human and planetary futures. Strengthen education as a global common good by ensuring more equitable cooperation within and across countries. It is increasingly clear that to overcome past injustices and transform the future there needs to be greater worldwide collective responsibility for education. Education is now moving beyond national borders. Stewarding education as a global common good will require moving beyond philanthropy and aid – to also think about reparations for the glaring inequities that have been created and permitted in our world.

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UTILISATION LEVEL OF OPEN EDUCATIONAL RESOURCES (OER) AMONG TEACHER EDUCATORS

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Abstract

The term Open Educational Resources (OER) was first introduced at UNESCO's 2002 Forum on Open Courseware and defined as "learning, teaching, and research materials in any format and medium that reside in the public domain or are under copyright but have been released under an open license that permits no-cost access, reuse, repurpose, adaptation, and redistribution by others" (UNESCO, 2019). OER has been shown to reduce learning costs, increase accessibility to educational resources, and enhance learning quality. The 5Rs of using OER (retain, reuse, revise, remix, and redistribute) can support innovation in teaching and learning).

The Open e-Learning Content Observatory Services (OLCOS) operates under the European eLearning Programme and is committed to advancing the creation, sharing, and global utilization of Open Educational Resources (OER). In 2007, OLCOS conducted a roadmap study that emphasized integrating innovative teaching methods with OER.

Over the last ten years, educators worldwide have been exploring using open educational resources (OER) in the teaching and learning process. There has been ongoing discussion among teachers about its terminology, benefits, and limitations. OER refers to technology-enabled educational resources that are openly provided and can be accessed and adapted for non-commercial use. It's important to distinguish OER from open learning, resource-based learning, or open publishing. OER takes advantage of new technology, allowing the incorporation of various media. According to Butcher (2011, p.6), OER specifically refers to materials for teaching and learning that can be used for pedagogic purposes, including scholarly articles and content.

The Paris OER Declaration (UNESCO, 2012) defines open educational resources as "teaching, learning, and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation, and redistribution by others with no or limited restrictions." This definition encompasses materials for undergraduate (UG), postgraduate (PG), and up to research and post-doctoral programs in higher education. Information and Communication Technology (ICT) plays a significant role, in shaping the traditional world in the context of globalization. Thanks to Open Educational Resources (OER), knowledge can be obtained at no cost.

This paper focuses on the study of the utilisation of OERs by the teacher educators of secondary educational institutions (B.Ed. Colleges) of urban areas in the jurisdiction of Kuvempu University & Davangere University jurisdictions respectively.

The sample consisted of 23 teacher educators at the urban level, and the survey method was used to conduct the research It was found that the level of utilisation towards open educational resources is found to be significantly moderate among secondary education teacher educators' awareness, and attitude in all streams.

Keywords: Open Educational Resources (OERs), Awareness, Attitude & Utilisation, Secondary Teacher Educators

I. INTRODUCTION

"Open Educational Resources (OERs) are free digital materials that can be used for teaching, learning, and research. They can include text, media, and other educational resources and can be accessed and shared online. OERs are available to everyone and come in various file formats. When using OERs within Creative Commons licensing, remember these 05 Rs like, Reuse: Content can be used in its

original format in various ways, Retain: Copies of content can be kept for personal archives or reference, Revise: Content can be modified to suit specific needs, Remix: Content can be combined with other similar content to create something new, Redistribute: Content can be shared with others in its original or altered format.CC enables educational resources to evolve and be improved through peer and student edits. CC-licensed OER are living documents that can be built upon and improved not only by authors and publishers but by colleagues and students as well.

E-learning involves more than just technology. It includes various instructional and pedagogical approaches that create a comprehensive learning environment on the Internet. In higher education, e-learning is widely used to support academic programs. Open Educational Resources (OERs) provide a valuable alternative for improving access to high-quality educational content. Many renowned universities worldwide offer these resources under open licenses. Combining these concepts can be a powerful strategy for enhancing the quality of curricula in higher education institutions, especially in developing nations like India. It can help standardize the learning outcomes of international academic programs and reduce the costs associated with educational content development. This research aims *the level of utilisation towards open educational resources is found to be significantly moderate among secondary education teacher educators' awareness, and attitude in all streams.*

II. NEED AND SIGNIFICANCE OF THE STUDY

The focus of this study is on the use and importance of Open Educational Resources (OER) by Teacher Educators in their professional development to train future teachers. Teachers need to constantly update their knowledge, and Teacher Educators have a vital responsibility to prepare individuals who will shape and mould the future of our society. In the past, the only way to access knowledge was through written materials like books, magazines, and newspapers. However, with the advent of digital content, one can gain access to information from anywhere in the world at a low cost. In the twenty-first century, education, learning, and research are more closely linked to ICT and other networking technologies. The internet has become a dynamic and powerful medium for channelizing educational resources. The role of teachers, educators, and researchers is constantly evolving, and this has led to changes in the ways and means of accessing and communicating information and knowledge.

The National Policy on Education 2020 emphasizes the significance of technology-oriented education. Open Educational Resources (OER) play a vital role in creating and sharing knowledge, aligning with the needs of different learning groups. To effectively harness these resources, teachers need to be actively involved in producing and sharing educational materials. Teacher educators should have a strong grasp of accessing open content, which encompasses freely available, openly licensed text, media, and other digital assets that are beneficial for teaching, learning, and research purposes.

III. REVIEW OF RELATED LITERATURE:

The study sought to examine the impact of OER-related factors, teacher-related factors, and school-related factors on the use of OER by teachers. The research revealed that OER-related variables, particularly the pedagogical quality and content quality exhibit a greater capacity to predict the extent to which teachers use OER. Regarding school-related factors, the use of OER among Chinese K-12 teachers is positively influenced by the school culture support and technological support. Conversely, leadership support hurts the adoption of OER. Regarding factors related to teachers, the study determined that only the self-efficacy of teachers in utilizing OER has a positive impact on the use of OER in China**, Cai, Dong, Li, and Wong (2023).** The results showed that lecturers were prepared and actively used OERs in education like Netex, to develop personalized learning materials for the learners

and integrate dynamic features like audio, video, and self-evaluation into course content, **Ojo, Salawu, and Adedapo (2023).** It is revealed that faculty mostly used videos, lectures, images, and website links. YouTube, specifically YouTube Edu and YouTube School, TED Talks and TED-Ed, and Khan Academy were identified as the most frequently used OER repositories. The results indicated that the majority of faculty members intend to adopt OER, **Llanda (2023).** The study discovered that faculty members use class presentations, images, and videos as the most prevalent OER content, indicating their efficacy in enhancing instructional materials. Teachers included OER in their class plans as supplementary materials for students, as well as in their coursework and research, as evidenced by the studies performed by Karipi (2020) and Bharti and Leonard (2021), **Al-Zahrani (2023).** It is found that the teachers recognized OERs as digital and non-digital materials available at their institutions that can be used to stimulate classroom discourse, increase engagement between lecturers and students, and boost student achievement, **Ojo, Salawu, and Adedapo (2023).** It is discovered that faculty members possess a moderate perception regarding the ease of modification and the overall quality of OER. Even though the teachers had positive views on the benefits of OER and attitudes towards publishing their course materials, it was found that legal issues prevented them from effective application (Kursun, Cagiltay, and Can, 2014), **Al-Zahrani (2023).** This study observed the influence of e-learning on the cognitive, affective, and behavioural aspects of students (Martin et. al,2022). The results showed that e-learning has a greater impact on these areas when compared to face-to-face learning. Furthermore, the impact is more pronounced in higher education as compared to basic, mid-level, and upper-secondary education, **Lizzeth Navarro-Ibarra et al (2023).**

IV. OBJECTIVES OF THE PRESENT STUDY:

1. To study the extent level between awareness & attitude of Teacher Educators about Open Educational Resources (OER).
2. To study the extent level between awareness & utilisation of Teacher Educators about Open Educational Resources (OER).
3. To study the extent level between attitude & utilisation of Teacher Educators about Open Educational Resources (OER).
4. To study the relationship between awareness & attitude of teacher educators about their Open Educational Resources (OER).
5. To study the relationship between awareness & utilisation of teacher educators about their Open Educational Resources (OER).
6. To study the relationship between attitude & utilisation of teacher educators about their Open Educational Resources (OER).

V. HYPOTHESES OF THE STUDY:

1. There is no significant difference between the awareness & attitude of the Teacher Educators' about their Open Educational Resources (OER).
2. There is no significant difference between awareness & utilisation of Teacher Educators' about their Open Educational Resources(OER).
3. There is no significant difference between attitude & utilisation of Teacher Educators' about their Open Educational Resources(OER).
4. There is no significant relationship between awareness & attitude of teacher educators about their Open Educational Resources(OER).

5. There is no significant relationship between awareness & utilisation of teacher educators about their Open Educational Resources(OER).
6. There is no significant relationship between attitude & utilisation of teacher educators about their Open Educational Resources (OER).

VI. METHODOLOGY: The researchers employed the descriptive survey method.

VII. POPULATION: The population of the study included 250 teacher educators working in secondary teacher education institutions belonging to aided & unaided colleges of Kuvempu University & Davangere University at the urban level.

VIII. SAMPLE: The study's representative sample included 23 teacher educators from two colleges of Kuvempu University & Davangere University respectively of Karnataka State, India for the Research Study. The researcher used the stratified random sampling technique for the present study.

IX. TOOLS USED: In the study, the researcher constructed and validated the following tools. Open Educational Resource (OER) Awareness, Open Educational Resource OER) Attitude & Open Educational Resource (OER) Utilisation inventory for the collection of data respectively.

X. STATISTICAL TECHNIQUES USED: The data is analyzed by using the statistical techniques of t-test & correlation and descriptive analysis

XI. ANALYSIS OF DATA:

Objective- 01: To study the extent level between awareness & attitude of Teacher Educators' about their Open Educational Resources.

Hypothesis(H_0)- 01: There is no significant difference between the awareness & attitude of Teacher Educators' about their Open Educational Resources.

Table -01

Table showing a number of awareness and attitude's mean score, standard deviation, and 't' value

OER Type	N	M	Std. Deviation	t-value	Significance at 0.05 level
Awareness	23	132.08	09.14	.000	**NS**
Attitude	23	278.13	20.60		

NS= Not Significant

It is clear from the table 01 that the calculated 't' value .000 is lesser than the criterion value 2.080 at a 0.05 level of significance. So, the null hypothesis is **accepted** that "There is no significant difference between awareness & attitude of Teacher Educators' about their Open Educational Resources."

Figure-01

However, the descriptive analysis of the data observed from the graph-01 depicts there is a high attitude of OER among Teacher Educators compared to their awareness of OER.

Objective- 02: There is no significant difference between awareness & utilisation of Teacher Educators' about their Open Educational Resources.

Hypothesis(H$_0$)- 02: There is no significant difference between awareness & utilisation of Teacher Educators' about their Open Educational Resources.

Table -02

Table showing a number of awareness and utilization's mean score, standard deviation, and 't' value

OER Type	N	M	Std. Deviation	t-value	Significance at 0.05 level
Awareness	23	132.08	09.14	.016	**NS**
Utilisation	23	144.65	15.51		

NS= Not Significant

It is clear from the table 02 that the calculated 't' value .016 is lesser than the criterion value 2.080 at a 0.05 level of significance. So, the null hypothesis is **accepted** that "There is no significant difference between awareness & utilisation of Teacher Educators' about their Open Educational Resources."

Figure-02
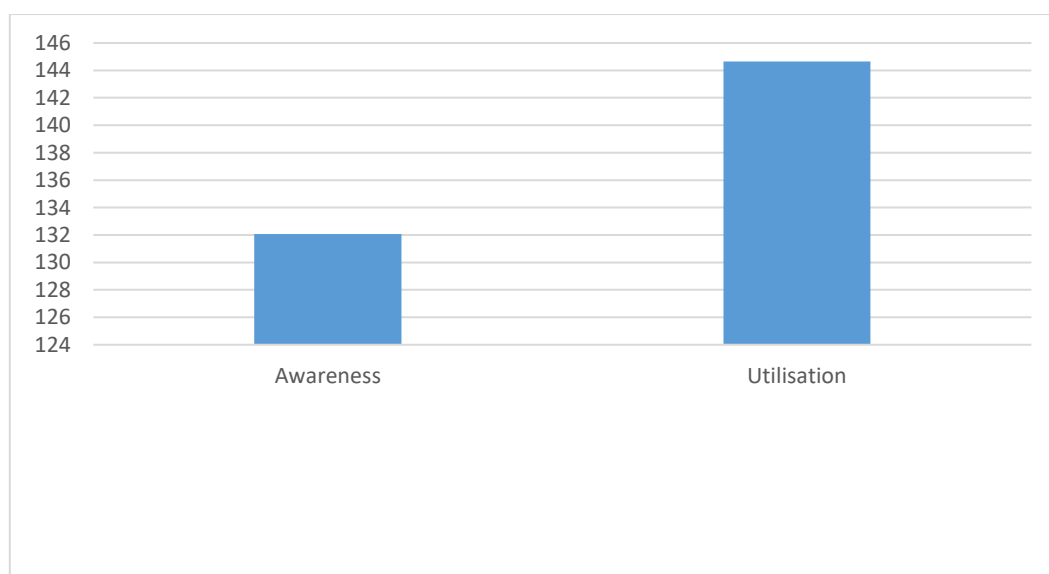
However, the descriptive analysis of the data observed from the graph -02 depicts there is a high utilisation of OER among Teacher Educators compared to their awareness of OER.

Objective- 03: To study the extent level between attitude & utilisation of Teacher Educators' about their Open Educational Resources.

Hypothesis(H$_0$)- 03 There is no significant difference between attitude & utilisation of Teacher Educators' about their Open Educational Resources.

Table -03

Table showing a number of attitude and utilization's   mean score, standard deviation, and 't' value

OER Type	N	M	Std. Deviation	t-value	Significance at 0.05 level
Attitude	23	278.13	20.60	.052	**NS**
Utilisation	23	144.65	15.51		

NS= Not Significant

It is clear from the table 03 that the calculated 't' value .052 is lesser than the criterion value 2.080 at a 0.05 level of significance. So, the null hypothesis is **accepted** that "There is no significant difference between attitude & utilisation of Teacher Educators' about their Open Educational Resources."

Figure-03
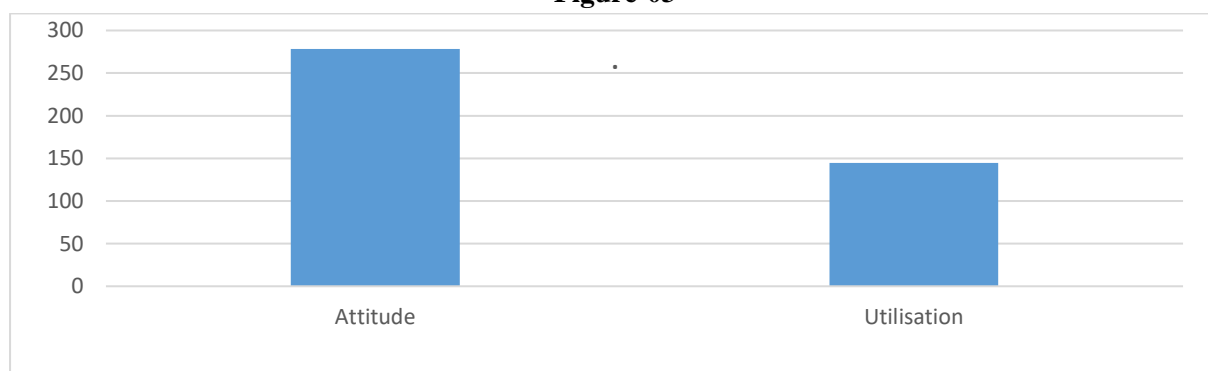
However, the descriptive analysis of the data observed from the graph-03 depicts there is a high attitude of OER among Teacher Educators compared to their utisation of OER.

Objective - **04**: To study the relationship between awareness & attitude of teacher educators about their OER

Hypothesis-04: There is no significant relationship between awareness & attitude of teacher   educators about their OER

Table- 04

Table showing the correlation between the Teacher Educators' Awareness & Attitude about their OER.

		Teacher Educators' Attitude
Teacher Educators' Awareness	Pearson Correlation	.199
	Sig. (2-tailed)	.362
	N	23
"Correlation is Not Significant at the 0.01 level (2-tailed)		

Figure-04
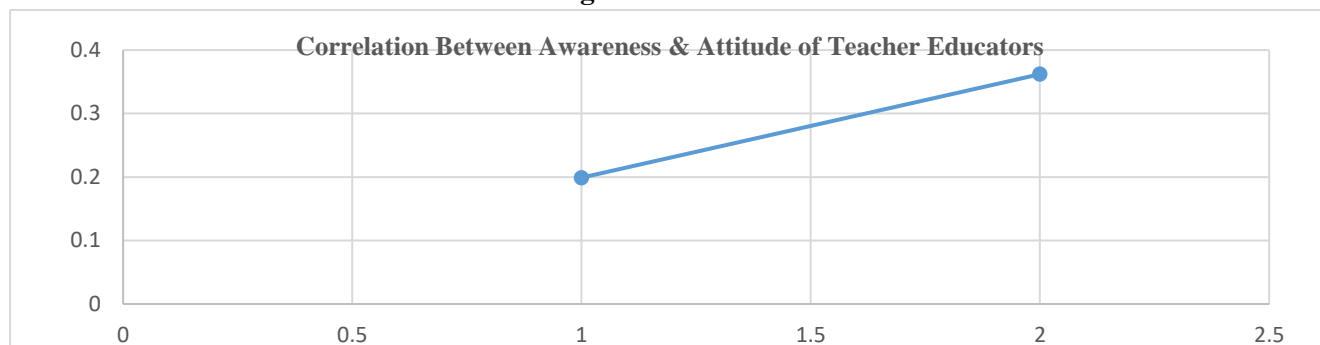
When descriptively analysed from the above graph-04 depicts there is comparatively **No Significant relationship** between awareness & attitude of OER among Teacher Educators.

Objective - **05**: To study the relationship between awareness & utilisation of teacher educators about their OER

Hypothesis -05: There is no significant relationship between awareness & utilisation of teacher educators about their OER

Table- 05

Table showing the correlation between the Teacher Educators' Awareness & Utilisation about their OER

		Teacher Educators' Utilisation
Teacher Educators' Awareness	Pearson Correlation	.230
	Sig. (2-tailed)	.291
	N	23
"Correlation is Not Significant at the 0.01 level (2-tailed)		

Figure -05
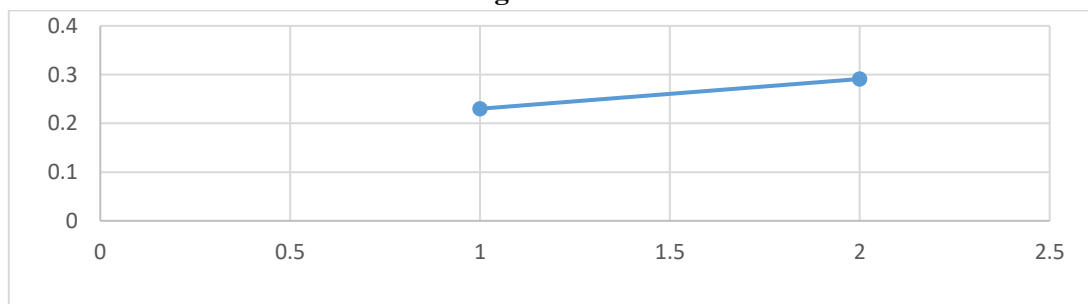
When descriptively analysed the above graph-05 depicts there is comparatively **No Significant relationship** between awareness & utilisation of OER among Teacher Educators.

Objective - **06**: To study the relationship between attitude & utilisation of teacher educators about their OER

Hypothesis -06: There is no significant relationship between attitude & utilisation of teacher educators about their OER

Table -06

Table showing the correlation between the Teacher Educators' Attitude & Utilisation about their OER

		Teacher Educators' Utilisation
Teacher Educators' Attitude	Pearson Correlation	.532
	Sig. (2-tailed)	.009
	N	23
"Correlation is Significant at the 0.01 level (2-tailed)		

Figure -06
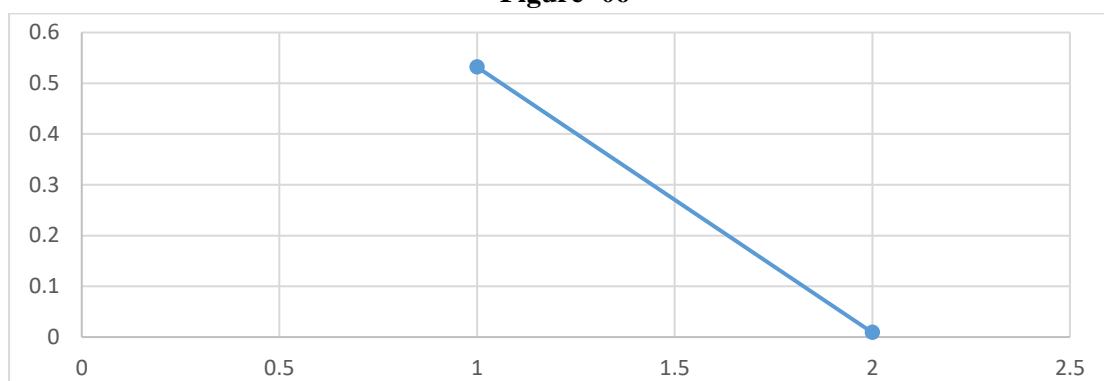
When descriptively analysed the above graph-06 depicts there is a comparatively **Significant relationship** between attitude & utilisation of OER among Teacher Educators.

XII. FINDINGS OF THE STUDY:

Based on the descriptive analysis of the data the following are the findings

1. There is a high attitude of Open Educational Resources (OER) among Teacher Educators compared to their awareness of OER.
2. There is a high utilisation of Open Educational Resources (OER) among Teacher Educators compared to their awareness of OER.
3. There is a high attitude of Open Educational Resources (OER) among Teacher Educators compared to their utilisation of OER.
4. There is no significant relationship between awareness & attitude of teacher educators about their Open Educational Resources (OER).
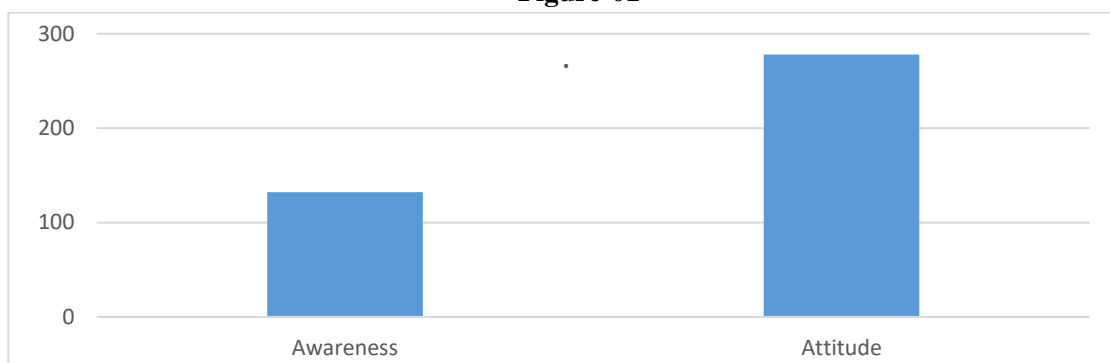5. There is no significant relationship between awareness & utilisation of teacher educators about their Open Educational Resources (OER).
6. There is a significant relationship between attitude & utilisation of teacher educators about their Open Educational Resources (OER).

XIII. CONCLUSION:

In analysing the overall findings on the utilization of Open Educational Resources (OER) by teacher educators, it was observed that educators from both universities have a low level of awareness and attitude towards OER. There was no significant relationship found between awareness and attitude/utilization of OER, but a significant relationship was found between attitude towards OER and its utilization. The study suggests that while teacher educators have a positive attitude towards

using OER, they lack proper awareness of where to access and how to use it. Updating their knowledge in this area could increase the number of OER users for effective utilization. It indicates that the OER provided by various agencies is not being fully utilized by teacher educators, highlighting the need for proper guidance. Therefore, efforts are necessary to train teacher educators in utilizing OER, with the aim of improving the knowledge and efficiency of student teachers in the field of teaching.

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SOCIAL MEDIA A NEW PARADIGM: HONING TO QUALITY OF SECONDARY EDUCATION

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Abstract

A rapid change and development are observed in both software and hardware due to the innovative nature of computer and internet technologies. Social media is one of these. Social media is a wide definition of various network tools and technologies that emphasize the social characteristics of the internet as the communication and cooperation instrument of the 21st century, resulting from the developments in internet technologies. Although social media, which is a rapidly improving field, dates back to 1969 when CompuServe was used as an online service (Banks, 2007), it can be considered that it began in 1997 in the modern sense in which the internet offered users to create their profiles and make friends with other people (Boyd and Ellison, 2007). At the end of the 1990s, people began sharing messages, photos, and videos through their own blogs. Along with the increase in the usage degree that occurred as a result of the establishment of Facebook in 2004, YouTube in 2005, SlideShare, and Twitter in 2006, it was observed that social media settings, which served for various fields, were improved (Boyd and Ellison, 2008; Dao, 2015; Grosseck and Hotescu, 2008).

Social media has significantly impacted teenagers, especially at the secondary level. It provides virtual platforms for sharing information and ideas, including Facebook, YouTube, Telegram, Instagram, and WhatsApp. The effectiveness of academic performance involves in recent days the continuous development of skills based on learnability and usage of social media technology.

The article discusses how social media platforms like Facebook, WhatsApp, Twitter, and YouTube impact students' academic performance. It emphasizes the crucial role of teachers in integrating technology effectively and the benefits of social media for blended learning.

In recent years, secondary educational institutions, especially CBSE and ICSE schools, have embraced technology, offering students extensive opportunities to use it in their daily classroom activities and school administration. However, the successful integration of technology depends on it being a regular, transparent, and accessible practice that assists students in achieving their goals and reduces the burdens of both students and teachers.

Keywords: Social media, Secondary levels, Students' academic performance, social media four platforms, ICT.

INTRODUCTION

Social media is a valuable platform for educational institutions to connect and share information, contributing to innovative teaching and learning methods. With the recent shift from offline to online learning, social media plays a crucial role in reaching learners through various means simultaneously. It encompasses internet-based applications that facilitate the exchange of information in the form of text, audio, video, and more. Social media enables the creation of public or semi-public profiles by individuals or groups and is based on Web 2.0 technology. Various social media platforms are currently in use, with Facebook, Twitter, WhatsApp, YouTube, Wikipedia, LinkedIn, Reddit, Instagram, and Pinterest being among the most popular.

The emergence of various kinds of social media has created the fourth wave of communication after print, radio, television, and theatre art. It has significantly impacted people's lifestyles worldwide. The reach of social/digital media is noteworthy, achieving an audience of 50 million homes in just 4 years. The convergence of technology with the connection of the internet has altered traditional mass

communication from a one-to-many model to many-to-many communication networks. This has brought about phenomenal changes in the social behaviors of users, especially those in the age group of 13-19 years.

Social media platforms have influenced the cultural landscape and socioeconomic behavioral dimensions globally, impacting aspects such as food habits, mindset, fashion, lifestyles, thought patterns, and social and psychological associations. Computers and smartphones have become inevitable gadgets in both urban and rural environments, it acquired the field of education currently with some essentials. The survey says the use of social media is comparatively more in urban areas than in rural, maybe the lack of required facilities. The first social media platform, SixDegrees.com, allowed communication through message sharing but ceased to exist in 2000. Subsequently, platforms such as Friendster and LinkedIn emerged in 2002, followed by others like Flickr, Facebook, Hi5, Orkut, Myspace, YouTube, Cyworld (China), and Yahoo! 360. Later platforms included Windows Live Spaces, Ning, Asian Avenue, and Bebo (relaunched), as well as Twitter, Facebook, and Cyworld (USA).

Notably, Facebook, Twitter, Instagram, and WhatsApp are the most commonly used social media platforms by students. In Nigeria, many students spend a significant amount of time on these platforms, often at the expense of their educational and career pursuits, typically spending 2 to 3 hours per day checking activities and updating their smartphone profiles.

EVOLUTION OF SOCIAL MEDIA:

The concept of social media has roots dating back to the 19th century. It began with Samuel Morse's use of electronic dots and dashes on a telegraphic machine in 1844. This eventually led to the development of ARPANET in 1969, which was the precursor to today's internet and social media. In 1987, the National Science Foundation further advanced the internet, and in 1997, the first true social media platform, Six Degrees, was launched. This allowed users to create profiles, connect with friends and family, and send messages. Friendster, launched in 2001, was one of the earliest platforms to attract millions of users. Since then, numerous social media platforms have emerged, and there are now more than 100 such platforms worldwide, each serving various purposes and catering to different age groups and fields.

Social media refers to internet-based platforms or websites that enable users to engage in various activities such as sharing information, communicating, interacting, and collaborating with others online (Ferine et al., 2023; Tarigan et al., 2023). Social media allows individuals and groups to create, edit, and share content in the form of text, images, videos, or audio with other members of their social network (Ausat, 2023; Az-zaakiyyah, 2023). Here are some key characteristics of social media:

1. **User Profiles**: Social media users typically have personal profiles containing information about themselves, such as their name, photo, interests, and more. These profiles enable users to introduce themselves and interact with others.

2. **Content Sharing**: Users can post content like statuses, photos, videos, articles, or messages that can be viewed by others in their network. This content can be shared, commented on, or liked by other users.

3. **Social Interaction**: social media facilitates social interaction among users, including communication through comments, private messages, or reactions to content shared by others.

4. **Friend Networks**: Social media users can connect with friends, family, colleagues, or even strangers in their social network, forming online friend networks that can be used for communication and information sharing.

5. **Knowledge and Interest Sharing**: social media also allows users to join groups, communities, or forums that align with their interests and hobbies. This enables the exchange of knowledge and experiences in specific areas.

6. **Versatile Usage**: Social media can be used for various purposes, including socializing, networking, business, marketing, education, activism, news consumption, entertainment, and more. Each social platform may have different focuses or goals (Karneli, 2023; Sudirjo, 2023).

THE MAJOR PRECAUTIONS TO BE TAKEN FOR THE USAGE OF SOCIAL MEDIA IN THE CONTEXT OF SECONDARY-LEVEL STUDENTS

● Parental control should be initiated with screentime limitation and constant communication with the children. Parents engage in outdoor activities and children minimize social media usage.

● The government can take the initiative in promoting third-party digital audits, and data protection laws, and in 2024, accountability of the platforms for their content can be initiated.

● Digital literacy can be brought into practice to prevent students from losing opportunities in the future due to their underprivileged background.

● Platforms that recommend or amplify inappropriate content can be prohibited, including adult material or exploitative content.

● Certain features like auto-play and push alerts can be banned and the products are targeted to youth or teenagers.

● Institutions can give access to only internet about the study materials required with proper assistance for the projects and seminars, debates, etc.

- Management control over the internet access at the institution.
- Limited use of social media platforms enhances the teaching-learning process in the classroom.
- Motivating the students to be focused on their goals and proper utilization of social media platforms creates opportunities to improve their academic skills and basic life development skills.
- Guiding in using high-quality websites and educational software.

SOCIAL MEDIA USAGE IN INDIAN SCHOOL EDUCATION CONTEXT:

The research of the Indian level is summarized below based on themes identified from those studies. In India, students are at an early stage of benefiting from creative teaching methods and technology, with a digital divide hindering full technology use. Incorporating social media into higher education poses challenges in aligning it with the curriculum. Research suggests that social networking platforms like Facebook can benefit higher education, and using social media can enhance the quality of education. Additionally, a model has been developed to detect students' learning styles based on their personal, academic, and social media data, aiming to improve learning outcomes.

DIFFERENT WAYS TO IMPLEMENT TECHNOLOGY IN EDUCATION TO BENEFIT THE STUDENTS

  ➢ **Basic technological integration that can be used in the classroom:**
- Writing an essay in a Word document
- PowerPoint presentation
- Use of digital textbooks
- Use of websites

- Engaging in video conference
- Engaging in social media platforms
- Use of digital whiteboards

➢ **Creating digital literacy** is essential for leveraging technology, which can be achieved through online learning while maintaining a focus on academics.

➢ **Communication Skills**: communication has become a core part of our social life, students practice their communication skills through social media platforms like WhatsApp, YouTube, Telegram, Facebook, Instagram, and Snapchat. This is the place where students especially adolescents tend to spend more screentime in exchange of thoughts, sharing ideas, photos videos, etc.

➢ **Internet homework assignments**: posting the topics on social media platforms helps the students to work independently and keep them engaged and organized in their work.

➢ **Grading system**: Grading the student's performances online helps the parents and student's strengths and areas of improvement and helps the teacher to keep track of the student's record.

➢ **Classroom tablet**: helps the teacher to have one-to-one instruction allowing the students to work at their own pace with their assigned work.

➢ **Different learning styles**: In any activity assigned to the students, we cannot accept the learning at the same speed, and similarities, and individual differences can be seen. Implementation of the technology helps them to cope with their learning styles.

➢ **Other resources**: apart from the classroom teaching and textbook, students with the help of computers and smartphones access outside the curriculum to learn about the people places, and their fields of interest, also the textbook provides online sources that provide extra pictures, videos, and activities which interest the students.

➢ **Job readiness**: in the present world job profiles are specified with the basic technological skills, the learning of technological skills and having an open eye and mind on the social media platforms at the secondary school level help them in choosing their career and leverage their knowledge of the digital world to solving the obstacles.

TECHNICAL ADVANTAGES OF SOCIAL MEDIA IN EDUCATION TODAY:

- **Interactivity and academic involvement**:
  The past few decades witnessed the rise of social media and its credibility as a rich source of information. It is more like a beacon of change that globalizes one's presence as an independent contributor. It is through social media that teachers foster technological utility and students' involvement in studies. A good sense of collaboration in the classroom enhances the overall impact of the lecture. The increased level of involvement takes interpersonal communication to a new level.

- **Propagation:**
  Effective interchange of ideas, information, and links has become easier than ever before. Students spend a crucial part of their academic curriculum with their classmates. Staying connected through handheld devices prevents the mismanagement of information. Thanks to the augmented opportunities of remote sharing.

- **Universal presence:**
  Most frontrunners in the education world stay connected to their academic audience through modern-day channels. Their definition may include YouTube, Twitter, Facebook,

and LinkedIn. These channels apply themselves earnestly to sensitize the educational details and updates.

- **Cost-efficiency and secure encryption**:
  Today, social media creates and edits every detail in seconds. Social media enables the dissemination of every advancement in research or academics via end-to-end encryption. More and more secure gateways address the existent pitfalls and derive multiple solutions to prevent oversights.
- **Unilateral connectivity:**
  Nothing hinders interpersonal, interdepartmental, or intradepartmental connectivity today. The social media channels hold due credit for everything having become effortless nowadays in technology. The integration of social media technology in education is conveniently bridging the gaps that concerned connectivity in the past decades.

CHALLENGES OF SOCIAL MEDIA USAGE ON ACADEMIC OUTCOMES

Social media, with all its potential, comes with a host of drawbacks that might hinder students' progress in the classroom. Among the major challenges are:

1. **Distraction and Time Management:** Students can lose focus and productivity due to constant notifications, updates, and irrelevant content.
2. **Information Overload:** The abundance of information on social media can cause an overload of information. This can make it difficult for students to distinguish between relevant and accurate information, making it harder for them to identify credible sources and engage in critical thinking.
3. **Reduced Face-to-Face Interactions:** Reliance on social media can hinder the development of interpersonal skills necessary for various situations, as it may reduce face-to-face interactions among students.
4. **Privacy Concerns:** Students may unknowingly compromise sensitive data, leading to privacy and security issues.
5. **Negative Impact on Mental Health:** Social media addiction can lead to feelings of loneliness, melancholy, anxiety, and a fear of missing out (FOMO).
6. **Misinformation and Fake News:** Students may encounter inaccurate information resulting in errors or misinterpretations of academic content (Al-Sharqi & Hashim, 2016).
7. **Academic Integrity Concerns:** Collaborating on social media platforms can be tricky as it may lead to unethical practices like sharing answers or plagiarising content from online sources that can compromise academic integrity.
8. **Multitasking and Cognitive Overload:** Studying while using social media can lead to cognitive overload, affecting learning quality and academic success.
9. **Disruption of Sleep Patterns:** Late-night social media use can disrupt students' sleep patterns, leading to compromised well-being and cognitive abilities during classes and exams.
10. **Addiction and Time Management**: Students who use social media excessively may develop addictive behaviors that divert them from their studies.
11. **Equity and Access:** Not all students have equal access to reliable technology and internet connections, resulting in differences in their learning experiences and opportunities.

12. **Boundary Between Personal and Academic Use:** The integration of social media blurs the line between personal and academic use, making it challenging for students to maintain a healthy balance (Dyson et al., 2015).

RECOMMENDATIONS FOR THE FUTURE OF THE INSTITUTION:

1. Institutions should build an adaptation culture to keep up with the ever-changing social media world. This entails keeping up with emerging platforms and fashions.
2. Enhance the instruction of digital literacy so that students can critically analyze content, responsibly use social media, and communicate politely online.
3. Provide continual professional development for educators to improve their ability to properly integrate social media into the classroom.
4. Encourage the study of how social media integration affects student engagement and learning outcomes. The research's conclusions will direct best practices and provide information for choices.
5. Address the digital divide by providing fair access to technology and stable internet connections for all students, allowing them to fully participate in social media-integrated learning.
6. Investigate and implement collaborative platforms that correspond with educational objectives. Make certain that the platforms you choose prioritize privacy, security, and educational efficiency.
7. To keep students interested and involved, always create new engagement strategies that make use of social media's possibilities.
8. Create open avenues of communication for students and educators to share input on social media integration. Make informed modifications and improvements based on this feedback.
9. Form alliances with social media firms and technology professionals to keep ahead of technological advances and harness their experience.
10. Create and explain explicit ethical principles for educational social media use, emphasizing responsible behaviors, privacy, and academic integrity.

CONCLUSION:

As technology becomes more prevalent in education, educators ensure students are proficient in using it for academic and personal development from secondary school onward. Technology and online learning, including social media, provide real-time analytics for teaching and learning, offering students global knowledge and support to stay current with evolving trends. Generation Z strives to establish their identities and thrive in a competitive world using social media. Young individuals must overcome obstacles with guidance and positive influence, fostering confidence and creativity for a better future.

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THE TENDENCY OF LEARNING APPS AMONG +2 SCIENCE STUDENTS

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Abstract

In today's education system, the use of technology is increasingly common, and educational apps have emerged as powerful tools for enhancing learning. For students in the science stream of grade 12, who are at a crucial stage of their academic journey, the attitude towards learning apps is very important as they prepare for higher education or specialized fields. Understanding their perception and acceptance of these tools can provide insights into the effectiveness and potential challenges of integrating them into the educational curriculum. The attitude towards learning apps among grade 12 science students reflects not only their openness to technological innovations but also their willingness to adopt alternative learning methods beyond traditional classroom settings. This attitude is influenced by various factors such as ease of use, perceived usefulness, perceived enjoyment, and compatibility with their learning styles and preferences. In the Indian context, following the COVID-19 pandemic, we faced similar challenges in school education. The solution was to adopt technology-based teaching and learning to replicate offline learning and to build learners' confidence in their education. The use of learning apps has been discussed among +2 science students worldwide. These apps make learning easy and accessible, especially with the increasing use of smartphones among children. Educational apps have become common in classrooms, improving learning methods for new generations.

This paper focuses on the attitude of +2 science students towards learning apps in the urban area of the Davanagere district. The sample consisted of 20+2 science students at the urban level, and the survey method was used to collect the data. It was found that the attitude towards learning apps is found to be significantly different among +2 science students in all streams.

Keywords: learning apps, attitude, +2 science students

INTRODUCTION

The digital revolution is transforming education by using information and communication technologies (ICTs) to improve students' learning outcomes. In the last 50 years, changes have been seen in every area of society, such as culture, entertainment, and social interaction. However, the current educational model is very similar to how it was back then. Although there is evidence of the negative impact Internet access, social networks, and the use of mobile devices could cause in current education, the use of mobile technologies is gaining ground in education. Due to the characteristics of mobile devices, and the inexperience of teachers and educational institutions, students may experience distractions in their learning and may be involved in inefficient educational methodologies. The digital revolution is transforming these educational models, involving students, teachers, and educational institutions in this process.

The appropriate use of digital technologies and a pedagogical approach in the design of learning models could generate an improvement in the learning results of the students. Nowadays, learning using portable digital devices, such as mobile learning (m learning), expands into all daily activities that are related to acquiring knowledge. The study of educational innovations has become increasingly important in educational research. Mobile devices, clearly, are growing faster than the world's population. Cisco in its Annual Internet Report (2018–2023) published in March 2020, forecasts that smartphones will have the second-fastest growth by the end of 2023.

In today's education sector, technology is increasingly common, and learning apps have emerged as powerful tools for enhancing education. +2 Science students have an important attitude towards learning apps, reflecting their openness to technological innovations and alternative learning methods. This attitude is influenced by ease of use, perceived usefulness, enjoyment, and compatibility with their learning styles and preferences.

Several studies have examined students' attitudes toward learning apps in different educational settings. For example, research has shown that perceived usefulness, ease of use, enjoyment, and social influence significantly impact students' acceptance of educational apps. Cultural and contextual factors also play a crucial role in shaping students' attitudes for developers and designers of educational technologies. Insights derived from such understanding can inform the development of more user-friendly and effective learning apps tailored to the specific needs and preferences of this demographic.

NEED AND IMPORTANCE OF THE STUDY:

The study on the attitudes of +2 science students towards learning apps is highly important in today's education system. As technology becomes more prevalent, it's crucial to understand students' perceptions and acceptance of learning apps to shape educational policies and practices. The findings of this study offer valuable insights into students' preferences and needs, emphasizing the potential benefits of integrating educational apps into the curriculum. By identifying factors that influence students' attitudes, such as perceived usefulness and ease of use, educators and policymakers can customize interventions to improve the effectiveness of learning apps in supporting student learning. Additionally, the study's exploration of gender differences highlights the need to consider diverse student populations in the design and implementation of educational technologies. Overall, this research contributes to the ongoing efforts to use technology for academic improvement and emphasizes the need for continued innovation and adaptation in educational practices.

LITERATURE REVIEW:

It is revealed that faculty mostly used videos, lectures, images, and website links. YouTube, specifically YouTube Edu and YouTube School, TED Talks and TED-Ed, and Khan Academy were identified as the most frequently used OER repositories. The results indicated that the majority of faculty members intend to adopt OER, **Llanda (2023).** The study discovered that faculty members use class presentations, images, and videos as the most prevalent OER content, indicating their efficacy in enhancing instructional materials. Teachers included OER in their class plans as supplementary materials for students, as well as in their coursework and research, as evidenced by the studies performed by Karipi (2020) and Bharti and Leonard (2021), **Al-Zahrani (2023).** The study delves into the perceptions and preferences of +2 science students regarding learning apps. Results indicate a varied spectrum of attitudes, influenced by factors such as prior experience with technology, learning styles, and individual preferences. The study underscores the need for customizable and adaptive learning apps to cater to diverse student needs and preferences, **Khan, F & Ali. S (2022)** It explores the impact of learning app integration on classroom dynamics and student engagement. Educators reported positive outcomes, including increased student participation, personalized learning experiences, and enhanced teacher-student interactions. However, challenges such as technical issues and resource constraints were also noted, emphasizing the importance of adequate support and training for effective implementation, **Anderson, K & Wilson, B. (2021).** It is stated that the study explores the factors influencing the attitude of +2 science students towards learning apps. Through survey data analysis, factors such as perceived usefulness, ease of use, and social influence were identified as

significant predictors of attitude toward learning apps. The study emphasizes the importance of addressing these factors to promote positive attitudes and effective usage of learning apps, **Patel, R & Shah. S (2021).**

OBJECTIVES OF THE PRESENT STUDY:
>   The following objectives are framed for the present study:
1. To study the difference between male and female + 2 science students' about their attitude of learning apps.
2. To study the difference between urban and rural + 2 science students' about their attitude of learning apps.
3. To study the relationship between male and female + 2 science students' about their attitude of learning apps.
4. To study the relationship between urban and rural + 2 science students' about their attitude of learning apps.

HYPOTHESES OF THE STUDY:
   H₀1: There is no significant difference between male and female + 2 science students' about their attitude of learning apps.

   H₀2: There is no significant difference between urban and rural + 2 science students' about their attitude of learning apps.

   H₀3: There is no significant relationship between male and female + 2 science students' about their attitude of learning apps.

   H₀4: There is no significant relationship between urban and rural + 2 science students' about their attitude of learning apps.

METHODOLOGY: The researcher employed the descriptive survey method.

POPULATION: The study population included 1600 +2 science students studying in various Pre-University (+2 science) colleges in the Davanagere District.

SAMPLE: The study's representative sample included 30 students from two Pre-University (+2 science) colleges in the Davanagere District: Karnataka State, India for the present study. The researcher used the stratified random sampling technique.

TOOL USED: The researcher constructed and validated the following tool in the study.

Attitude of Learning Apps among +2 Science Students.

STATISTICAL TECHNIQUE: The data is analysed by using the statistical techniques of t-test & correlation and descriptive analysis

ANALYSIS OF DATA
1. **Objective 01-** To study the difference between male and female + 2 science students' about their attitude of learning apps.

   Ho 01- There is no significant difference between male and female + 2 science students' about their attitude of learning apps.

Table -01

Table showing the number of Male and Female, their mean score, standard deviation, and 't' value

Gender	N	M	SD	t-value	Significance at 0.05 level
Male	09	174.00	18.43	.578	NS
Female	21	171.42	15.95		

NS= Not Significant

It is clear from the table- 01 that the calculated 't' value of .578 is lesser than the criterion value of 2.048 at a 0.05 level of significance. So, the null hypothesis is **accepted** that "There is no significant difference between male and female + 2 science students' attitude towards learning apps".
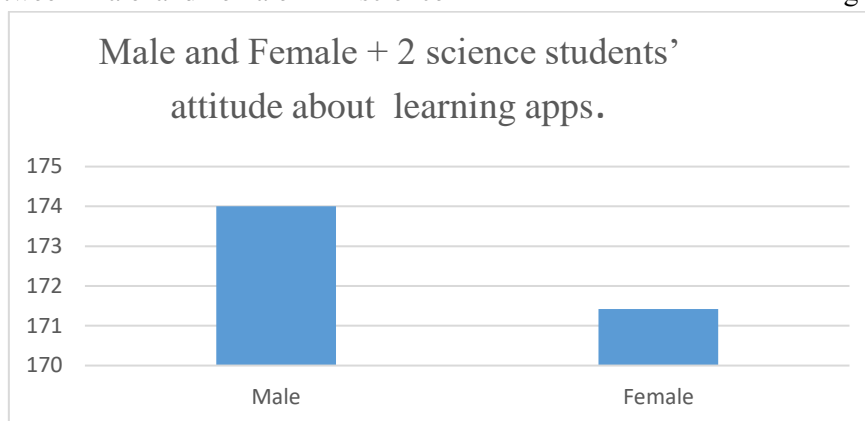
When the data is descriptively analysed the above graph depicts there is comparatively a high attitude of learning apps among male students compared to the female students.

2. **Objective 02-** To study the difference between urban and rural + 2 science students' about their attitude of learning apps.

   Ho 02 - There is no significant difference between urban and rural + 2 science students' about their attitude of learning apps.

Table -02

Table showing the number of Urban and Rural, their mean score, standard deviation, and 't' value

Locality	N	M	SD	t-value	Significance at 0.05 level
Urban	15	176.20	14.23	.419	NS
Rural	15	168.20	17.99		

NS= Not Significant

It is clear from the table- 01 that the calculated 't' value of .419 is lesser than the criterion value of 2.048 at a 0.05 level of significance. So, the null hypothesis is **accepted** that "There is no significant difference between urban and rural + 2 science students' attitude towards learning apps".

Urban and Rural + 2 science students' attitude about learning apps.
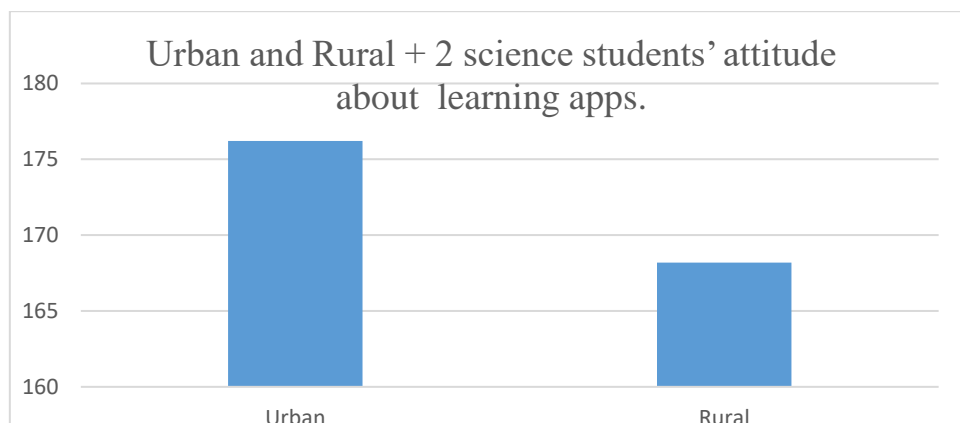
When the data is descriptively analysed the above graph depicts there is comparatively a high attitude of learning apps among urban students compared to rural students.

3. **Objective 03-** To study the relationship between male and female + 2 science students' about their attitude of learning apps.

Ho 03 - There is no significant relationship between male and female + 2 science students' about their attitude of learning apps.

Table -03

Table showing the correlation between the there is no significant difference between male and female + 2 science students about their attitude of learning apps.

		+ 2 science Female students' utilization
+ 2 science Male & students' Attitude	Pearson Correlation	.016
	Sig. (2-tailed)	.967
	N	30
"Correlation is **Not Significant** at the 0.01 level (2-tailed)		
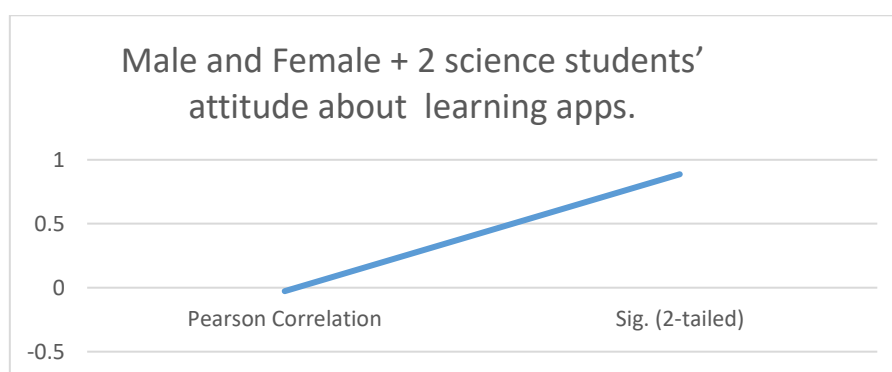
Male and Female + 2 science students' attitude about learning apps.

When descriptively analysed the above graph, it depicts there is comparatively **No Significant relationship** between male and female + 2 science students' attitude towards learning apps.

4. **Objective 04-** To study the relationship between urban and rural + 2 science students' about their attitude of learning apps.

Ho 04 - There is no significant relationship between urban and rural + 2 science students' about their attitude of learning apps.

Table -04

Table showing the correlation between the there is no significant difference between urban and rural + 2 science students about their attitude of learning apps.

		+ 2 science Rural students' utilization
+ 2 science Urban & students' Attitude	Pearson Correlation	-.143
	Sig. (2-tailed)	.610
	N	30
"Correlation is **Not Significant** at the 0.01 level (2-tailed)		
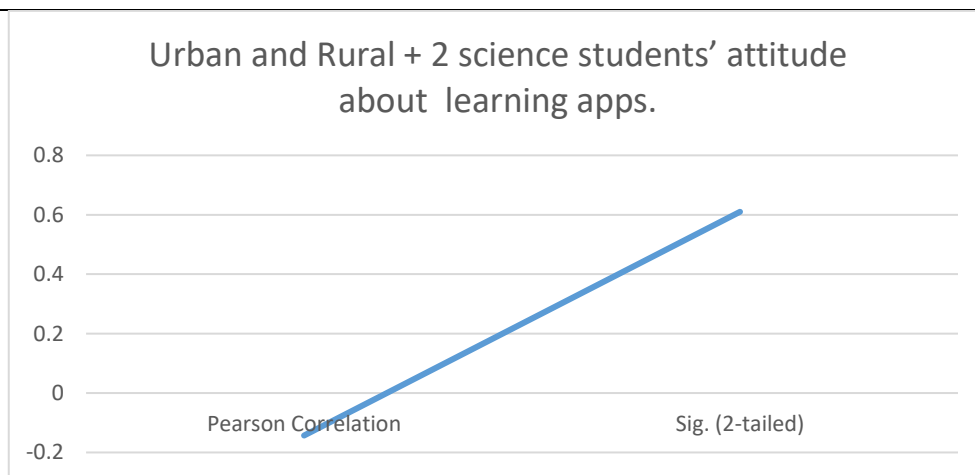
Urban and Rural + 2 science students' attitude about learning apps.

When descriptively analysed the above graph, it depicts there is comparatively **No Significant relationship** between urban and rural + 2 science students' utilization towards learning apps.

FINDINGS OF THE STUDY:

The study found a moderate level of + 2 science students' utilization towards learning apps in total. Except these, the following are the other findings of the present study.

1. The male + 2 science students have the higher level compared to the female + 2 science students about their attitude towards learning apps.
2. The urban + 2 science students have the higher level compared to the rural + 2 science students about their attitude towards learning apps.
3. There is no significant relationship between male & female + 2 science students about their attitude towards learning apps.
4. There is no significant relationship between urban & rural + 2 science students about their attitude towards learning apps.

CONCLUSION:

The study examined the use of learning apps by +2 science students and found that most students have an average attitude towards the apps, with some showing a positive attitude. Comparatively, urban-level & male students have a high tendency of utilization to rural level female students. However, some students face challenges due to a lack of resources and technical support. Educational

apps offer a convenient platform for learning, but it's important to ensure effective design and implementation, considering factors such as usability, relevance, and equal access.

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A STUDY ON CAUSES AND CONSEQUENCES OF SCHOOL DROPOUTS IN VIJAYAPURA CITY

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Abstract

Education has the ability to completely transform a person's life, as is well known. Learning modifies perception and thought processes. As a result of education and learning, you frequently challenge pre-existing assumptions. This distinction in instruction enables you to broaden your horizons and engage with people without bias. The purpose of education is to help people think more critically and to help them form perspectives and views about life. It can help you become more intelligent and respected by others. People in society come in varied shapes and have diverse perspectives. A person with a wealth of ideas is able to explore and debate a wide range of subjects, including politics, the environment, and society. Education-based knowledge can be very helpful in guiding you towards the proper choices and decisions.

Understanding and interpreting the wide range of complicated elements that contribute to the occurrence of students dropping out of school will be aim of this study. In particular, the phenomenon of high school dropouts is highlighted by this study. Numerous family, school, and community factors will be found in the research data to influence students' likelihood of graduating or dropping out of high school. These include: poverty, a lack of family and school stability, almost all of the participants' parents were dropouts themselves, social conduct, rebellion, peer pressure, and a sense of caring.

Keywords: School Dropout, Causes, Consequences, Secondary schools

Introduction

Education is the groundwork of an affluent and empowered civilization. Education plays a basic role in the progress of a nation. However, dropout rates in Indian schools have been a most important cause of concern for policymakers and educators. It is also a momentous issue in many countries worldwide, especially in emergent countries. Any society can accomplish progress only through education of its members. In the mounting societies, education is anticipated to inculcate varied knowledge's, understanding and skills. Education can be inculcating modern values and ethics. It is mostly believed that the spread of education will play a very basic role in the socially, economically, culturally and politically sustainable development of the society. It is certainly a reality in all the developed nations that their development has been made possible only through educational development of their people.

One persistent issue in our society has been the dropout rate. A child who quits school forfeits their opportunity to educate themselves and is lost to society forever. Dropout must be prevented, and if it has already occurred, all relevant authorities, agencies, the community, school, and family must act quickly to stop it. Each has to use their particular resources, techniques, and methods to do this. If not, dropout rates would be a common occurrence in our community.

Characteristics of Dropouts

A number of independent factors (variables) influence dropout rates, including the school environment, socioeconomic and socio-psychological factors, the prevalence of child labour, the age of the child, the parents' disapproval of education, and the need for some children to start earning a living at a young age. In addition to the aforementioned factors, family migrations and residence changes also contribute to dropout rates. A few key strategies to lower the rate of waste and dropout include not

promoting youngsters, repeating admissions (double admission), moving, and changing residences. In most cases, a youngster who consistently misses school is considered a dropout. However, the length of absence varies depending on the time period that is used. For the purposes of this study, a child is deemed to be a dropout if they miss more than 30 days of school without cause in a calendar month. Nonetheless, the local teachers must verify any excuses given by the kid such as health issues, parental apathy, or lack of interest for the child's prolonged absence from school, and remedial action must be taken to ensure that the child attends on a regular basis. Any absence is deemed voluntary and needs to be handled, assuming that the teachers take the initiative to address dropout rates and by accounting for several additional variables including migrating, changing residences, and issuing transfer certificate.

Retention and dropout rates can be calculated in a variety of ways. Gross dropout rate, which takes repeaters into account, is defined as hundred minus retention rate. Total dropout is calculated by separating the repeaters (failures and those who took transfer certificate, assuming those who have taken are in the system). Manageable dropout and net dropout are the two components of total dropout. The agency is addressing the former through a number of alternative schooling initiatives, such as tent schools. On the other hand, net dropout is voluntary and necessitates community mobilization and awareness-raising. A school's enrolment, instructors' recorded attendance, and the students' actual attendance in a class are all significant factors that can be used to estimate the absenteeism rate of its student body.

Causes of School Dropouts

Every child has a fundamental right to an education. It serves as the cornerstone for combating societal prejudices and disparities. It gives society the tools to right the inherited injustices and gives everyone the chance to flourish, be treated equally, and have opportunities. Education is the foundation for all equalizing variables, including employment, health, gender parity, growth, and development.

1. *Financial Challenges:* For families from poorer socioeconomic origins, the cost of educating their children becomes a barrier to their education. Because their parents can no longer afford to pay even the minimal costs, these youngsters frequently drop out of school.
2. *Absence of Infrastructure:* One of the main causes of female students dropping out of school is a lack of basic sanitation. Other times, multiple subjects or levels are taught in the same place at the same time due to a lack of space and teaching personnel, which makes it challenging for pupils to pay attention or stay on task.
3. *Domestic or Economic Obligations:* Children must eventually enter labour due to the financial struggles that families endure. Girls often leave school to help with housework or other household duties, but guys typically leave school in search of employment.
4. *Interest in Education:* Many of these kids don't feel that the lessons they are learning in school have any bearing on their daily lives or surroundings. There is a dearth of current and limited instructional materials. Lessons are learnt through repetition most of the time, and there are no textbooks. Due to a lack of involvement, the pupils find it difficult to cope and eventually lose interest.
5. *Impact of Migration:* The nature of their parents' jobs causes the children of migratory parents from poorer socioeconomic backgrounds to lack education. Even when these kids attend school, they leave as soon as their parents have to relocate in order to find a new job, which usually happens at the conclusion of a project or short-term engagement.

6. *Social Issues:* Gender prejudices, social norms, and cultural dos and don'ts are examples of practices that lead to discrimination in society. This is a significant challenge for children from underprivileged backgrounds. These social problems increase inequality, which raises the number of school dropouts.

7. *Early Marriage:* The prevalence of early marriage customs, particularly for girls, is a major contributing factor to the high dropout rates among girls, in addition to safety and hygienic concerns. Among lower-class girls, those with higher levels of education are often viewed as liabilities for the family because it can be difficult to find compatible partners.

8. *Poor Infrastructure and Support:* Children who are differently abled or who have physical or mental health issues often struggle because there is not enough infrastructure or knowledge to meet their requirements. For these pupils, there is an even greater disparity in access to school due to the lack of resources.

Objectives of the study

1. To understand the causes and consequences of dropout in the High Schools
2. To find out the major causes for children to drop out of their school in the study area.
3. To suggest the remedial measures to reduce the incidence of dropouts

Hypotheses of the Study

Based on the objectives of the study, the following hypotheses will be formulated, to examine them in the light of the factual details obtained from different sources for present inquiry.

1. There is no significant difference between government and private school dropouts in their perceptions towards causes and consequences.
2. There is no significant difference between male and female school dropouts in their perceptions towards causes and consequences.
3. There is no significant difference among different study level school dropouts in their perceptions towards causes and consequences.
4. There is no significant difference among different age-group school dropouts in their perceptions towards causes and consequences.

Review of Literature

Aju Kurian, Aakarsh Kujur, Uddalak Ahmed, Udish Chopra, Zaid Hossain (2023), a conducted study on School Dropouts: Reasons and Prospective Solutions-Teachers' Perspective. Study revealed that private schools have much lower dropout rates than their counterparts, i.e., government and NPO institutions. Jacoba Sylvia Snyders (2013), that it has major side-effects on learners. This serious problem causes many learners to drop out of school. Ngamaba, Kayonda Hubert, Lombo, Laddy Sedzo, LOMBO, Gloria et al. (2021), conducted study on Causes and Consequences of School Dropout in Kinshasa: Students' Perspectives before and after Dropping out. The study had found males and females as the highest percentage was associated with myself as responsible for dropping out, followed by teachers, parents and then entourage‖. Manjeel Rai (2015), conducted study on School Dropouts and Its Impact on the Society in Sikkim. Study revealed that the ages more specifically 14 and 12 years have the maximum chances of dropping out from school in case of male and female students, respectively. Júlia Angélica de Oliveira Ataíde Ferreiraet al. (2021), the findings show that the factors associated with learning from the student himself and his family group are the ones that exert the most significant influence. Saif Ur Rehman and Muhammad Asif Malik (2023), Indicated that lack of interest in elective subjects, irregularity in class, outdated examination system, lack of consistency and sustainability due

to policy changes, Poor policy implementation regarding uniform examination system, every day changing of text books and failure in 9th class are the major causes of dropout. Chinonso et al. (2022), it can be rightly stressed that high cost of education, association with peer or peer influence, early marriage and unwanted pregnancies of unmarried girls, quest to get rich are factors that cause students to drop out of school.

Chintamayee Sarangi (2009), studied on the Effect of Psychosocial and Institutional variables on School Dropouts in the Age group of 6-14 years with special Reference to Tribal Children of Goalpara District. The study found low aspiration among the tribal children and their prolonged socio-cultural deprivation and less exposure to the cultural ethos of modernity. The most of tribal children dropouts (60%) were caused by inadequate institutional facilities. The socio-economic status of the parents of non-dropout tribal children is much better than the tribal dropout children along with better school adjustment ability. The socio-economic status of the parent or family is the main determinant of school adjustment as supported by Mathur (1999), Miller et, al (2006), Margetts (2003). Sateesh Gouda M and T.V. Sekher (2014) study on Factors Leading School Dropouts in India: An Analysis of National Family Health Survey-3 Data‖. The finding found that children did not interest in studies because the school fees were too much at the same time they need to work household work and earn money for payment. Similar findings by J. Mishra Pratibha, et. al., (2014) found the reason was due to a lack of interest in schooling. The causative factor for dropout was students were engaged in their household matters like take care of their younger siblings and household work as their parents engaged in daily labour. Eric Vincent Mudemb, (2010) conducted a study on the causes of dropout among boys and girls from secondary schools in Ugenya district, Siaya County, Kenya. The study revealed that both boys and girls dropped out of school due to financial and economic factors.

Implications of the study

A certain amount of the district's dropout rate may be decreased if the emphasis is on putting the recommendations into practice as effectively as feasible. Retention rates can be improved and school dropout rates can be avoided by using the study's findings and conclusion.

1. It is crucial to provide schools with the necessities. ICT tools that are visually appealing should also be utilized in teaching and learning. When necessary, arrangements should be made for the children's transport needs.
2. A plan should be in place to give stability and support so that kids can attend school in order to address circumstances that can obstruct their education, such as a family member's critical illness or the loss of the breadwinner.
3. Programs designed with the active participation of the community should be included in the school curriculum in order to make learning worthwhile and engaging for the kids.
4. The department's programs should be structured to provide ample opportunity for strengthening the bonds between the community and the school, benefiting both.

Limitations of the Study

1. The empirical study is limited to Vijayapura city.
2. The study is limited to respondents of school dropouts, who were sampled purposively and were readily available in the study.
3. It is limited to know about the domestic or social conditions, but no scope to know either scholastic ability on class study.

Recommendation

1. Regardless of the family's financial situation, the government should lower the cost of education so that it is accessible to all.

2. Parents should be keeping an eye on their kids by learning about the kinds of friends and activities they participate in. This is because peer groups have a big impact on pupils, especially those who are struggling at home or at school.

3. Parents should be held accountable for their actions by providing for their children, participating in their education, and working to prevent unmarried females from getting into early marriages and becoming pregnant against their will.

4. Our educational system should be run effectively by offering courses that will encourage students' creativity, hiring skilled teachers, providing the tools and training they need, and offering incentives and compensation to them.

5. It is advised that guidance counselors be available in secondary schools to assist students experiencing dropping out syndrome, particularly boys who may be negatively impacted by peer pressure.

6. The needs, objectives, and aspirations of both the general public and students should be taken into consideration when overhauling the educational system.

7. To inspire students to reach their full potential, teachers should have access to the necessary resources. This will lessen the likelihood of school dropout temptation.

8. Instructors ought to have sufficient motivation to work at their best and help students avoid social vices.

9. Youths should look up to elders in the community, especially teachers, as role models and excellent examples.

10. Regarding religious and moral instruction in schools, both the government and school administrators ought to adopt new perspectives. In order to improve teenagers' overall development, the topic should receive some attention and importance, just like scientific and social science disciplines do.

11. In order to raise the bar for education standards and quality, visitation panels, inspectorate divisions, and entities in charge of our higher education institutions' supervisory tasks should be provided with the appropriate incentives to carry out their duties.

12. Programs in secondary schools must to incorporate entrepreneurship and vocational skills. This ought to be required in school. This is one way the administration can deflect criticism regarding student dropout rates without looking foolish.

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EMPOWERING INDIAN WOMEN THROUGH EDUCATION

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"Education is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process."
—*ICPD Programme of Action*

Education is important for everyone, but it is especially significant for girls and women. This is true not only because education is an entry point to other opportunities, but also because the educational achievements of women can have ripple effects within the family and across generations. Investing in girls' education is one of the most effective ways to reduce poverty. Investments in secondary school education for girls yields especially high dividends.

Girls who have been educated are likely to marry later and to have smaller and healthier families. Educated women can recognize the importance of health care and know how to seek it for themselves and their children. Education helps girls and women to know their rights and to gain confidence to claim them. However, women's literacy rates are significantly lower than men's in most developing countries.

The education of parents is linked to their children's educational attainment, and the mother's education is usually more influential than the father's. An educated mother's greater influence in household negotiations may allow her to secure more resources for her children.

Educated mothers are more likely to be in the labour force, allowing them to pay some of the costs of schooling, and may be more aware of returns to schooling. And educated mothers, averaging fewer children, can concentrate more attention on each child.

Besides having fewer children, mothers with schooling are less likely to have mistimed or unintended births. This has implications for schooling, because poor parents often must choose which of their children to educate.

In terms of government policies on women's education, it was observed that while there is no explicit discrimination by gender in most places, neither is there a real commitment to provide sustainable programmes for women. There is such a perceived gap between the rhetoric and policies of decision-makers that many of the women considered the policies as simply paying "lip service" to women's concerns. Even in developed countries, the proportion of resources that is being allocated to women's needs is small considering the many diverse needs of the women. The fact that many of the decision -makers are men also constrains their appreciation of these needs.

The actual working and living conditions of women also prevent many of them from meaningful participation in women's education programmes/ projects. The increasing impoverishment of women makes it necessary for them to focus on income generating activities simultaneous with the performance of household chores. This, therefore limits their time and energy to get involved in education programmes. Many of the women that have been projected to be beneficiaries of development programmes are illiterate, so the issue of literacy as a women's development concern is likewise a priority. In spite of the above mentioned problems, the participants agreed that, in order to promote women's empowerment, it is necessary to create an environment that will allow women to participate

in educational programmes and share the benefits. It was therefore emphasized that while there is a need to set up specific education programmes for women, there is also a necessity to develop forms of education that will sensitize people towards gender discrimination and will raise their acceptance of women's promotion.

The Concept of Empowerment

There was consensus among the participants that "empowerment" has become one of the most widely used development terms. Women's groups, non-governmental development organisations, activists, politicians, governments and international agencies refer to empowerment as one of their goals. Yet it is one of the least understood in terms of how it is to be measured or observed. It is precisely because this word has now been one of the fashionable concepts to include in policies/programmes/projects that there is a need to clarify and come up with tentative definitions

Indicators of Empowerment

Understanding that empowerment is a complex issue with varying interpretations in different societal, national and cultural contexts, with a tentative listing of indicators. At the level of the individual woman and her household:

1) participation in crucial decision-making processes;
2) extent of sharing of domestic work by men;
3) extent to which a woman takes control of her reproductive functions and decides on family size;
4) extent to which a woman is able to decide where the income she has ear need will be channeled to;
5) feeling and expression of pride and value in her work;
6) self-confidence and self-esteem; and
7) Ability to prevent violence.

At the community and/or organizational

1) existence of women's organisations;
2) allocation of funds to women and women's projects;
3) increased number of women leaders at village, district, provincial and national levels;
4) involvement of women in the design, development and application of tech nology;
5) participation in community programmes, productive enterprises, politics and arts;
6) involvement of women in non-traditional tasks; and
7) increased training programmes for women; and
8) Exercising her legal rights when necessary.

At the national level:

1) awareness of her social and political rights;
2) integration of women in the general national development plan;
3) existence of women's networks and publications;
4) extent to which women are officially visible and recognized; and
5) the degree to which the media take heed of women's issues.

Facilitating and Constraining Factors of Empowerment

Empowerment does not take place in a vacuum. In the same way that Ms. Lazo talks about women's state of powerlessness as a result of "a combination and interaction of environmental factors," one can also discuss the conditions/factors that can hasten or hinder empowerment. As above, the listing is a preliminary one based on the discussions. Facilitating factors

1) existence of women's organisations;
2) availability of support systems for women;
3) availability of women-specific data and other relevant information;
4) availability of funds;
5) feminist leadership;
6) networking; favorable media coverage;
7) favorable policy climate.

Constraining factors

1) heavy work load of women;
2) isolation of women from each other;
3) illiteracy
4) traditional views that limit women's participation;
5) no funds
6) internal strife/militarization/wars
7) disagreements/conflicts among women's groups; ustructural adjustment policies
8) discriminatory policy environment
9) negative and sensational coverage of media.

Strategies for the Future

Through education is ideally seen as a continuous holistic process with cognitive, psychological, economic and political dimensions in order to achieve emancipation. Given the complexity of political, societal and international interrelations, one has to systematically think about the strategies and concrete proposals for future action if one hopes to achieve such a goal.

A set of strategies on education, research/ documentation, campaigns, networking, influencing policies, training and media was developed by the participants. As can be seen from the listing, the strategies are inter-related to each other.

Education

The formal and non-formal education systems would need to be considered. It would be important to analyze the gender content and to ascertain the manner in which it is addressed/not addressed in the educational system. On the basis of the analysis, curriculum changes would need to be brought about. Likewise it would be important to reorient the teachers on gender issues so that overall gender sensitisation in the educational system could be brought about. In concrete terms, this would mean.

1) Reorienting and reeducating policy makers
2) securing equal access for boys and girls in education;
3) holding workshops/seminars for teachers
4) revising teaching materials
5) producing materials in local languages
6) implementing special programmes for women in the field of Adult Education
7) incorporating issues such as tradition, race, ethnicity, gender sensitisation, urban and rural contexts in the programmes
8) raising awareness on the necessity for health care
9) politicizing women to show them how macro level mismanagement is responsible for their loss of jobs; and
10) Focusing on parents as role models.

Research/Documentation

The importance of doing participatory and action research was underscored. It was considered important to organize workshops to train grassroots women to conduct participatory research where they could develop skills to critically analyze their existing conditions. This will facilitate their organizing for collective action. While participatory research was considered to be important, it was recognized that traditional quantitative research was also necessary. The guiding principle, however, was to share the results with the women in a language and manner that was understandable to them. Research as a strategy would therefore entail:

1) disseminating information
2) producing and disseminating information leaflets regarding women's rights;
3) referring to women in all national and UN statistics;
4) collecting oral history of women
5) documenting and analyzing successful and failed programmes of the women's movements;
6) analyzing successful advocacy cases in order to learn about the arguments that persuade policy makers
7) collecting cross-cultural case studies
8) constantly evaluating research; and
9) Involving women as agents (instead of objects) of research.

Campaigns

If one is to have an effect in society, it is important to undertake campaign and lobby activities that will put the issue of gender in the minds of the legislators, policy-makers and the larger public. This will therefore

1) pushing for a dialogue between stake holders
2) raising gender issues within the national policy arena
3) pressuring to upgrade women's bureaus into ministries of women's affairs
4) lobbying for sex-equity and affirmative action legislation
5) lobbying for "counter structural adjustment policies;" organizing pressure groups (like "Greenpeace")
6) using consumer power for boycotts; securing access to information
7) demanding child care centers; and
8) producing videos and CDs, T-Shirts etc.

Networking

Through networking, it would be possible to share experiences and learn from one another. In this manner, understanding and solidarity among women's organizations, development organizations (governmental/non- governmental) and multilateral agencies could be forged. This would therefore entail networking at the national, regional and international levels. Moreover, at the international level, South-South linkages were considered to be particularly important.

1) organizing at least one meeting a year of gender sensitive organizations
2) bringing together donor agencies, governments and NGOs
3) setting up a north-south dialogue and collaboration
4) setting up a south-south cooperation and exchange
5) linking women's movements all over the world
6) establishing alternative credit schemes that offer women access to funds.

Training

In our societies, there is a gender division of labor which dictates the kind of training one acquires. If one talks about women's empowerment, it is important that women have access to the different training opportunities previously denied them. This therefore means:

1) preparing for jobs that are usually not open to them
2) providing income-generating projects that are market-oriented (not welfare-oriented projects); and
3) training capable female leaders at all levels.

Media

Considering the attitudinal barriers in traditional societies and the role which the mass media play in reinforcing them, the following strategies were advanced:

1) organizing mass media campaigns to raise awareness
2) creating a social climate friendly to women's issues
3) resisting the tendency to send women back to the kitchen; and
4) disseminating information about conferences that will take place in the coming years.

Conclusion:

Not-withstanding the remarkable changes in the position of women in free India, there is still a great divergence between the constitutional position and stark reality of deprivation and degradation. Whatever whiff of emancipation has blown in Indian society, has been inhaled and

enjoyed by the urban women, their population belonging to the rural areas are still totally untouched by the wind of changes. They still have been living in miserable conditions, steeped in poverty, ignorance, superstition and slavery. There still exists a wide gulf between the goals enunciated in the Constitution, legislations, policies, plans, programmes and related mechanisms on the one hand and the situational reality on the status of women in India, on the other. The human rights scenario in the country continues to be dismal and depressing. Women are being brutalized, commodified, materialized and subjected to inhuman exploitation and discrimination.

Women must become literate, as education is beneficial for them as well as their families. The family web is woven around the women. She has to be up to the mark and educated so that she could fend for herself and her family during the hour of crisis. The status of women would improve only if they educate themselves and grab every opportunity to become stronger and more powerful than before.

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ECONOMIC BENEFITS OF BUSINESS IN EDUCATION: A STRATEGIC PARTNERSHIP

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Abstract

This paper explores the economic benefits derived from strategic partnerships between businesses and educational institutions, highlighting their potential to transform communities and create a skilled workforce. As modern economies become increasingly complex, the collaboration between these sectors is vital to address the skills gap and ensure that students are equipped with the competencies needed for the evolving job market. The article discusses key benefits, including increased funding and resources for educational programs, job creation, and the development of tailored curricula that align with industry needs. Furthermore, it examines current trends, such as the emphasis on STEM education and the rise of online learning, which shape future collaborations. However, challenges such as balancing profit motives with educational integrity and addressing equity and access issues must be considered. To promote sustainable partnerships, best practices are recommended, including goal-setting, stakeholder engagement, and ongoing evaluation. Ultimately, the article calls for active collaboration between stakeholders in both sectors to foster dialogue, develop innovative solutions, and enhance educational opportunities that contribute to economic growth and community well-being.

Keywords: Business-Education Partnerships, Economic Benefits, Skilled Workforce, STEM Education, Job Creation, Recommendations.

1.   Introduction

In an era characterized by rapid technological advancements and shifting economic landscapes, collaboration between businesses and educational institutions has become increasingly critical. Business-education partnerships involve cooperative efforts where companies engage with schools, colleges, and universities to improve educational outcomes and connect academic learning with practical workforce skills. These partnerships include various initiatives, such as funding educational programs, curriculum development, internships, and professional development for educators. They aim to create a symbiotic relationship, benefitting both sectors—businesses gain access to a skilled workforce, while educational institutions receive valuable resources and real-world insights that enhance their curricula (Smith, 2023). The growing complexity of modern economies and the increasing demand for skilled labor has amplified the importance of these partnerships. Educational institutions play a crucial role in preparing students for the workforce, and collaboration with businesses can enhance this preparation by aligning programs with industry needs (Jones & Taylor, 2022). This article explores the economic benefits of business-education partnerships, presents case studies, discusses challenges, and offers strategies for effective collaboration. By examining these areas, the transformative potential of these partnerships in fostering educational success and driving economic growth will be illustrated.

☞   **Definition of Business-Education Partnership**

A **business-education partnership** refers to a collaborative relationship between educational institutions and businesses aimed at improving educational outcomes and addressing workforce needs. These partnerships can take various forms, including internships, mentorship programs, co-curricular

activities, research collaborations, funding for academic projects, curriculum development, and the provision of educational resources. At the core of these partnerships is a commitment to leveraging the strengths and resources of both sectors for mutual benefit.

2.   Economic Benefits of Business-Education Partnerships

⇨   Increased Funding and Resources

Businesses play a crucial role in providing financial support and resources to educational institutions, enhancing their capacity to deliver quality education. This financial contribution can take various forms, including:

■   **Direct Financial Contributions**: Many corporations donate funds to educational institutions to support programs, infrastructure development, and research initiatives. For instance, **Tech Corporation** has made significant donations to local universities, facilitating the creation of advanced laboratories and research facilities (Anderson, 2022).

■   **Funding Programs and Scholarships**: Companies often establish scholarship programs aimed at supporting students from underrepresented backgrounds or those pursuing specific fields. For example, the **National Merit Scholarship Program**, sponsored by numerous businesses, provides financial assistance to high-achieving students, ensuring they have access to higher education. Additionally, companies like **Bank of America** have developed scholarship funds for students studying finance, business, and technology, directly addressing workforce needs in their sectors.

■   **Grants for Educational Initiatives**: Businesses frequently offer grants to support innovative educational initiatives. The **Dell Technologies** grant program, for example, funds initiatives that integrate technology into classrooms, promoting digital literacy and preparing students for the tech-driven job market. These grants enable schools to purchase essential resources, such as computers and software, thereby enhancing the learning experience.

⇨   *Job Creation and Economic Growth*

Business-education partnerships are instrumental in generating job opportunities in both sectors. The collaboration between educational institutions and businesses fosters job creation in the following ways:

●   **Training and Employment Opportunities**: As educational programs develop in alignment with industry needs, students become more employable, leading to higher employment rates. For instance, partnerships between local community colleges and regional manufacturing companies can result in targeted training programs that prepare students for available positions in the industry (Roberts, 2023). These initiatives often lead to immediate job placements upon graduation.

●   **Economic Impacts**: A skilled workforce increases productivity and innovation, leading to business growth and broader economic benefits such as community development and local investment.

●   **Strengthening Local Economies**: Education investments strengthen local economies by preparing students for jobs, reducing unemployment and increasing disposable income, stimulating businesses, and providing long-term economic stability for communities.

⇨   Development of a Skilled Workforce

A primary benefit of business-education partnerships is the development of a skilled workforce tailored to meet industry demands. This is achieved through:

○   **Tailored Educational Programs**: Collaborations between businesses and educational institutions often lead to the creation of specialized training programs designed to equip students

with the necessary skills for specific industries (Green & Hall, 2022). For instance, partnerships in the technology sector may lead to curriculum updates that include coding boot camps or cybersecurity training, directly addressing the skills gap in the labor market.

o   **Curriculum Development Aligned with Industry Needs**: Businesses frequently collaborate with educational institutions to develop curricula that reflect current industry practices and technologies. For example, **Pfizer** has partnered with universities to create biotechnology programs that prepare students for careers in pharmaceutical research and development. This alignment ensures that graduates are job-ready and possess the competencies that employers are seeking, ultimately enhancing their employability.

o   **Internship and Apprenticeships**: These opportunities provide students with real-world experience, enhancing their employability upon graduation.

⇨   *Innovation in Educational Practices*

Businesses can significantly influence innovation in educational practices, enhancing teaching methodologies and technology use. The following points illustrate this impact:

●   **Driving Innovation**: Businesses bring a wealth of knowledge about industry trends and technological advancements that can transform educational practices. By collaborating with educators, companies can help integrate cutting-edge technologies into the classroom, promoting a more engaging and effective learning experience (Baker, 2024).

●   **Innovative Programs**: Innovative programs like Project Lead The Way, which partners with businesses to offer STEM education through project-based learning, foster critical thinking, creativity, and problem-solving skills. Technology companies like Google have developed resources and training programs for educators to incorporate digital tools into their teaching, ensuring students are equipped with the skills needed for the modern workforce.

●   **Research and Development Initiatives**: Collaborative research initiatives between universities and businesses can lead to innovative solutions and advancements in various fields. For instance, **IBM's** collaboration with universities on artificial intelligence research has not only contributed to technological advancements but also enhanced educational offerings in AI and data science, preparing students for future careers in these rapidly evolving fields.

3.   Challenges and Considerations

⇨   Potential Drawbacks of Business Involvement

Business-education partnerships offer numerous benefits, but they also have potential drawbacks, including the risk of profit motives overshadowing educational integrity (Williams, 2023). Profit-driven businesses may prioritize their interests over students' educational needs, leading to conflict in various ways:

☞   **Curriculum Influence**: Businesses may influence curricula to align with operational needs, potentially limiting students' exposure to diverse knowledge and skills, as technology companies may advocate for specific software or tools.

☞   **Commercialization of Education**: The increasing presence of businesses in educational settings can lead to the commercialization of education, where schools prioritize corporate partnerships and sponsorships over the best interests of students. This can result in educational programs that focus more on profit-generating activities rather than providing quality education.

☞   **Case Studies of Conflict**: Case studies of conflict between corporate interests and educational integrity highlight the need for clearer delineation between business interests and educational

integrity. For example, a fast-food chain's partnership with a school district led to controversy over unhealthy eating habits.

⇨   Balancing Profit Motives with Educational Integrity

To ensure that educational standards remain a priority in business-education partnerships, it is essential to establish a framework that balances profit motives with educational integrity (Nguyen, 2022). The following strategies can help maintain this balance:

☞   **Clear Partnership Guidelines**: Establishing clear partnership guidelines ensures educational priorities are upheld, defining roles and responsibilities, and retaining control over curricula and outcomes for educational institutions.

☞   **Stakeholder Involvement**: Stakeholder involvement, including educators, administrators, parents, and students, ensures partnerships prioritize student interests, promotes transparency, and prevents profit motives from compromising educational integrity.

☞   **Regular Assessments and Evaluations**: Regular assessments and evaluations of partnership impacts can identify potential conflicts and areas for improvement, focusing on educational outcomes, student experiences, and alignment with educational goals.

⇨   Addressing Equity and Access Issues

Kumar (2023) highlights that despite the potential benefits of partnerships, there is a risk that they may exacerbate existing educational inequities. Partnerships may favor affluent or well-resourced students, causing underserved groups to face disadvantages due to equity and access challenges.

☞   **Resource Allocation**: Business partnerships can cause disparities in funding, technology access, and educational programs.

☞   **Curricular Focus**: Partnerships may narrowly target specific industries, potentially marginalizing students with other skills.

☞   **Equity Strategies: Establish equitable partnership frameworks, engage communities, and focus on diverse partnership goals.**

4.   Strategic Approaches

▪   **Goal-Setting**: Goal-setting is crucial for successful partnerships between businesses and educational institutions, aiming to improve student employability, curriculum relevance, and technological advancements, while tracking progress and assessing effectiveness over time.

▪   **Stakeholder Engagement**: Stakeholder engagement is crucial in partnership development, involving diverse perspectives like educators, administrators, students, parents, and business representatives to understand needs and priorities.

▪   **Creating Supportive Policies**: Governments can enact policies that promote partnerships between businesses and educational institutions, providing incentives for collaboration. For instance, tax credits or grants can encourage businesses to invest in educational programs or initiatives, helping to alleviate funding constraints faced by schools.

▪   **Funding and Resources**: Government funding can be allocated to support joint initiatives between businesses and educational institutions. Programs such as the **Carl D. Perkins Career and Technical Education Act** in the United States provide federal funding for career and technical education, encouraging partnerships that enhance workforce development.

▪   **Successful Policy Initiatives**: Various policy initiatives have successfully encouraged business-education collaborations. For example, the **STEM Education Coalition** advocates for policies that promote partnerships between businesses and schools to enhance STEM education. Their

efforts have led to increased funding and resources for STEM programs, ultimately benefiting both students and industries that rely on a skilled workforce.

- **Facilitating Dialogue**: Governments can serve as facilitators of dialogue between businesses and educational institutions, helping to bridge gaps and align interests. This can be achieved through conferences, workshops, and other collaborative forums where stakeholders can share best practices and discuss challenges.

5.   Recommendations

To ensure the longevity and effectiveness of business-education partnerships, stakeholders should consider the following actionable recommendations:

- ❖ **The partnership should establish measurable objectives that align with the institution's educational goals and the company's business needs, guiding activities and providing a framework for evaluation.**
- ❖ **Regular open communication among stakeholders is essential for addressing challenges, sharing successes, and aligning everyone with the partnership's goals, which can be achieved through meetings or communication channels.**
- ❖ **Partnerships should be adaptable to changing industries and educational needs, necessitating stakeholder reassessment of goals, strategies, and activities to maintain relevance and impact.**
- ❖ **Investing in professional development for educators and business representatives can enhance partnerships by equipping them with the necessary skills to navigate the evolving educational landscape.**
- ❖ **Regular evaluation of partnership activities and outcomes is crucial for assessing effectiveness and identifying improvement areas. Stakeholders should establish success metrics and gather feedback for refinement.**
- ❖ **Community engagement is vital in partnership initiatives, involving input from members, local organizations, and parents to identify needs and priorities, promoting lasting change and positive outcomes.**

6.   Conclusion

Finally, Business-education partnerships are essential for fostering economic growth in the modern world. By strategically aligning the goals of education and industry, these collaborations can address the skills gap, enhance workforce readiness, and drive innovation. The economic benefits of such partnerships extend beyond individual students and businesses, contributing to broader societal goals such as regional development and reducing inequality.To maximize the potential of these partnerships, stakeholders must focus on long-term commitments, inclusive practices, and continuous adaptation to the evolving economic landscape. As businesses and educational institutions continue to collaborate, they will play a pivotal role in shaping the workforce of the future and driving sustainable economic growth.

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INTRODUCTION TO FUTURE EDUCATION

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Abstract

The whole concept of the future of education binds together the evolution of learning models, technology integration, and personalized approaches that shall eventually shape the learners for their survival in a rapidly changing world. Future education propped up by developments in artificial intelligence, virtual and augmented reality, and data-driven learning tools, would be flexible, inclusive, and even learner-cantered.

Personalised Learning Adaptive platforms of learning in the future will surge and build more on personalising education based on the needs of each individual student concerning learning style & speed. AI-enabled systems study performance data & make recommendations based on custom learning pathways for each learner. Integration of Technologies into Learning this would cover virtual classrooms, VR/AR simulations & AI tutors. Such technologies enable students to become immersed in the interaction of real-life scenarios & make learning much more interactive and effective. Lifelong Learning as industries continue to change and upgrade, the need for the development of continuous skills will banditry. In future education, the concept of lifelong learning will prevail, enabling further opportunities for re skilling and up skilling throughout one's career. Global Classrooms education will increasingly know no borders with online learning platforms sprouting. Students will get to have exposure to the best teachers and resources available across the globe, erasing all geographical boundaries. Emphasis on Crucial Skills as future curricula will emphasize much more on critical-thinking skills, creativity, collaboration skills & emotional intelligence than on rote memorization. Problem-solving & innovation will become core education activities.

Introduction

Future education is expected to be highly personalized, technology-driven, and globally interconnected. Advances in artificial intelligence, virtual and augmented reality, and adaptive learning platforms will tailor education to individual student needs, preferences, and learning speeds. Traditional classrooms are likely to evolve into more flexible, hybrid environments where online and in-person learning coexist seamlessly.

Emphasis will be placed on skills like critical thinking, creativity, collaboration, and digital literacy, preparing students for the fast-changing job market. Lifelong learning will become essential, with continuous education and re-skilling programs to adapt to technological advancements and societal changes.

Additionally, education will be more inclusive, offering equal opportunities through affordable access to resources and learning tools for all, regardless of geographic location or socio-economic background.

Objectives of future education

- With the advancement in society, technology, and the environment, the objectives for future education are increasingly changing. The main key objectives aimed at include:
- Fostering Critical Thinking and Problem-Solving: Equipping learners with the competency to analyse, reason, and solve many complex challenges.
- Promoting Lifelong Learning: Encourage continuous learning beyond formal education through flexible, accessible, and personalized pathways.

- Digital Literacy and Technological Fluency: Ensure students are proficient in using, understanding, and making technology while preparing them for a digital-first future.
- Integrating Creativity and Innovation: Encourage imagination, adaptability, and entrepreneurial thinking to meet the demands of dynamic industries.
- Care for the Environment: Let students be informed about sustainable living and current environmental issues around the world to inculcate a sense of responsibility toward Mother Earth.

Analysis of Future Education

The rapid development of technology, always changing to meet the needs of society, forms the future of education and calls for increasingly personalized learning experiences. Following are some key trends and areas of focus likely to shape education in the decades that follow:

1. Technological Integration

Artificial Intelligence: AI-enabled tools will be familiar, with customized learning platforms and virtual tutors. Such systems would adapt to the learning styles of students and help progress at their own pace.

VR/AR: Immersive technologies shall introduce an interactive, experience-based environment for better learning. For example, students might witness the historical events taking place or conduct science experiments virtually.

Gamification: Lessons in which game elements are included will create enthusiasm among learners, indeed, about the process of learning, and, therefore, it will be entertaining to learn lessons that are perceived as difficult by the students in mathematics, science, or languages.

2. Personalized Learning

The education model moves from the "one-size-fits-all" to an extremely personalized approach. Technologies like AI make it possible to develop individual learning pathways that take advantage of their strengths, weaknesses, and interests.

Competency-based education: The student will not progress based on time spent in a class, like moving to the next class after covering a year, but will progress based on competency gained in the subject matter.

3. Remote and Hybrid Learning

The COVID-19 pandemic accelerated online education and it is something that will probably be part of the core in the future. Hybrid models, which include online and in-person instruction, can be flexible on both the students' and teachers' parts.

With the advent of MOOCs and other such platforms, education has reached every nook and corner of the world. Students from remote areas or developing countries can also join courses of high quality.

4. Shift of Emphasis: From Knowledge to Skills

As the world around us keeps changing at an absorbing speed, the orientation of education will be towards focusing on skills for the 21st century: problem solving, creativity, emotional intelligence, collaboration, and adaptability.

There will be an increased emphasis on education in STEM, with a heavier focus on STEAM-the addition of the Arts-finding that critical place for creativity alongside technical skills.

- Globalization and Cultural Competency
- Lifelong Learning and Micro-credentials
- Equity and Inclusion
- Reimagining the Role of Educators
- Sustainability and Environmental Awareness
- Ethical and Privacy Issues

Techniques to adopt future education

The integration of advanced technologies, innovative teaching methods, and adaptable approaches all, together, characterize the future of education. Following are some of the key techniques that may shape future education:

1. **Personalized Learning**

   AI-enabled adaptive learning: AI can base its recommendations for resources and feedback on the analysis of individual learning style and needs.

   Differentiated Instruction: It is an adjustment in the content, pace, and learning strategies to best meet the needs of individual students as provided by their abilities and preferences.

2. **Blended and Hybrid Learning**

   Blended Learning: A mixing of traditional face-to-face classroom teaching with online resources, activities, and virtual collaboration.

   Flipped Classrooms: Learning of new content at home through videos or readings, application to be made in class through discussions and projects.

3. **Gamification**

   Game-Based Learning: Incorporating game elements like point systems, leaderboards, and different types of rewards to enhance engagement and motivation.

   Simulations: The use of virtual environments to enable learners to practice real-world skills without danger in a controlled setting.

4. **Immersive Technologies**

   VR and AR: These enable immersive and experiential learning experiences such as virtual field trips or interactive 3D models.

   Mixed Reality Labs: To give students the opportunity of experimenting with concepts that are complex in a virtual setting, which would be too expensive or dangerous to try out in real life.

5. **Platforms for collaborative learning**

   Online collaboration tools, such as Google Workspace or Microsoft Teams, allow collaboration in virtual space and peer learning.

   Global Classrooms: This organization connects various students from all parts of the world through virtual exchange programs to enhance cross-cultural learning.

   - Micro learning and Modular Education
   - AI-Powered Assessments
   - Lifelong Learning and Up skilling
   - Data-Driven Decision Making
   - Social-Emotional Learning (SEL) and Mental Health Support
   - Project-Based and Experiential Learning
   - AI Ethics and Digital Citizenship
   - Flexible Learning Environments

Procedure to be adopted for modern future education

Modern and future-oriented education denotes the adoption of new technologies, methodologies, and frameworks for meeting emerging needs in the digital and globalized world. Thereafter is a structured procedure that guides institutions, educators, and policymakers when it relates to adopting modern education practices:

1. **Assessment of Current System**

Learning Gaps Assessment: Audit the current educational model for needed improvements in what is delivered, accessible, and relevant.

Stakeholder Involvement: Involve students, teachers, parents, and community members to understand needs, aspirations, and challenges.

2. **Tech Integration**

Adopt Digital Learning Tools: Provide digital tools, including Learning Management Systems, gamified learning apps, and virtual classrooms to house online learning activities or simply to host blended learning.

AI and Data Analytics: Embed AI-powered tools for personalized learning experiences through adaptive assessments.

Immersive Learning through VR and AR: Introduce the use of virtual reality and augmented reality tools in subjects such as science, history, and art as a way of making learning interactive.

Coding and Robotics Skills: Integrate computational thinking, coding, and robotics to make the curriculum pertinent for future job markets.

3. **Curriculum Modernization**

21st Century Competencies: The core competencies that will become very important are critical thinking, problem-solving, creativity, collaboration, and emotional intelligence or quotient.

STEM/STEAM Focus: Integrate Science, Technology, Engineering, Arts, and Mathematics education into core subjects to foster interdisciplinary learning.

PBL or Project-Based Learning: An approach away from traditional rote learning; instead, the project-based inquiry-driven approach is applied in which learners research real-world problems.

Global Citizenship Education: To promote global awareness and understanding of cultures with a value-based approach toward attitudes which would adequately prepare them for a connected, yet diverse, world?

4. **Policy and Governance Framework**

Progressively Shaping Educational Policy: Advocate for policies that introduce innovation, the integration of technology, and flexibility in curricula into education.

Funding and Investment: Ensure funding for technology advancement, teacher training, and infrastructural development.

Monitoring and evaluation: To monitor continuously the state-of-the-art experiences with new models of education and technologies, making data-driven decisions for their improvement.

If all these steps are institutionalized, educational systems will be able to evolve and move abreast with the demands of the fast-changing World in order to mould a generation of students sure of facing the future with confidence.

- **Teacher Professional Development**
- **Infrastructural Development**
- **Flexible Learning Environments**
- **Evaluation and Feedback Innovation**
- **Promote Collaboration with Industry and Community**
- **Ensure Inclusiveness and Equity**

Conclusion

The future of education will be marked by a pinnacle of technology with traditional learning, a greater emphasis on individualized and skills-based learning, and the need for flexibility to accommodate

lifelong learning. This presents the challenge of balancing innovation with ensuring equitable access and addressing ethical concerns related to technology and data. In the future, education will be much more personalized, integrated with technology, and relevant to an ever-changing labour market. There will also be a greater emphasis on lifelong learning and flexibility, as educational systems and instruments change to reflect new progressions and requirements. Thus, it will prepare pupils for lifelong personal and professional development, not just their entry into the job market.

- **Integration of Technology:** In the future, education is more liable to depend on technology, including artificial intelligence, virtual, and augmented reality, along with online learning platforms. These will contribute positively to customized learning experiences, making education easier and more personalized.

- **Lifelong Learning:** The concept of education will no longer relate only to formal schooling, but rather lifelong learning. Continuous learning will be required in order to keep up with rapid technological and social changes. This encompasses both formal and informal learning opportunities throughout life.

- **Competencies and Skills:** Emphasis will be placed on developing critical thinking, problem-solving, and digital literacy abilities over and above the requirement for rote memorization. Competencies to be emphasized will revolve around creativity, collaboration, and adaptability that eventually prepare the students for an ever-changing world of work.

- **Global and local integration:** Increased integration of worldwide outlooks with the realization of local needs shall form the hallmark of education. It shall comprise an understanding of global issues, cultural diversity, fostering of global citizenship, and solving of local challenges.

- **Equity and Access:** Deliberate efforts shall be made to reduce educational inequities and make quality education accessible to all irrespective of socio-economic, geographic challenges, and other barriers. This also includes access to technology and resources.

- **Mental and Emotional Well-being:** The future system of education will be very much concerned with mental and emotional health for school students. Social-emotional learning would be part of the curriculum in a bid to help boost well-being and resilience.

- **Teacher Roles and Training:** Teachers will more often be seen in the role of facilitator of learning, not purely as a transmitter of knowledge. Professional development of teachers will focus on how to effectively integrate new technologies and pedagogies.

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NEW TRENDS AND CONCEPTS IN PHYSICAL EDUCATION AND SPORTS: AN INDIAN OUTLOOK

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Abstract

Despite not receiving the attention it merits, physical education and sports are an essential component of the educational system. Even though it has been a component of the curriculum since the very beginning of education, neither academicians nor students nor educational administrators have ever taken it seriously. Only in physical education are you allowed to converse while playing or performing. The average public's conception of physical education is one of large circles, nonstop play, and no labor. In one of his speeches, Abraham Lincoln reportedly said, "Sportsman is the finest Ambassador of the Nation". As a result, the director or teacher of physical education can serve as our institution's or universities finest ambassador. Currently, as compared to prior times, we can try to develop the entire discipline in physical education and sports, one must overcome obstacles and fight to improve the structure and infrastructure status in the area. This is due to the loss of physical education in schools today.

Keywords: Physical education, sports and Obstacles

Introduction

One of the crucial metrics and a crucial component of education in every nation at any period is physical education and sports. As a result, each nation should attempt to establish a framework for an action plan to promote and improve physical education and sports. Contrarily, sports are being gravely undervalued inside the educational system while seeing a remarkable surge in the media spotlight around the globe, especially in India. The growth of physical education in a nation is promoted by the physical education act, which also provides resources for the country and aids in the creation of an assessment system for educational advancements. Currently, in comparison to past years, we may observe a drop in physical education in the classroom. In order to build the general discipline in physical education and sports, one has to overcome the obstacles and struggles to enhance the structure and infrastructure status in the area.

Present Status of Physical Education And Sports

Despite attempts by member States to advance physical education and sports through international collaboration, concerns about the subject's unique qualities and value to education persist. Given the societal significance and media coverage of sports, the results of physical education and sports were concerning (especially within the school system). Its effects may be observed in the public authority for physical education and sport's trend toward high-performance and media-friendly sports (at a national level, across the public and private system). An important illustration of the need for a clear division between the ministries of education and youth affairs and sports.

The Physical Education World Summit was held in Berlin to discuss the state of physical education and sports. This effort was sparked by studies indicating the increasingly precarious state of physical education and sports in many nations. The following important conclusions were drawn from a global comparative research that gathered data and literature from around 120 different nations.

a)   Less time is allotted for physical education in the educational programme.

b)   Budget cuts combined with insufficient human, material, and financial resources.

c)   The subject is in a low status situation.

d)   Many nations lack adequate training for teachers.

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e)   Current physical education regulations are not correctly implemented.

Need of the innovative minds in the fields of physical education

The relationship between physical education and sports is preserved through physical education and sports. The reciprocal guarantee emphasized the principles of as a result, it is vital to view physical education and sports as an inherent aspect of education in all schools and colleges in a nation, where sports should be mandatory starting in elementary school and continuing through college. In reality, a quality education includes teaching the fundamentals of life skills, such as how to:

1.   Motivate one self, be creative, and solve problems.
2.   Use interactive tools (communication, physical, and IT tools).
3.   Join and coexist in socialist different groups.

Physical education and sports are specifically capable of fostering all of these life skills that are based on a board. It follows that international organizations, state governments, and municipal authorities must aggressively encourage physical education and sports. To advance the cause of physical education and sports, the educational community must coordinate and simplify these activities. As part of the effort to enhance the state of physical education and sports throughout the world, this will entail aiding in the restoration of the balance between them in the educational system.

Physical education and sports: An Indian context

Even though it has never received the attention it deserves, physical education and sports play an essential role in the educational system. Even though it has been a component of the curriculum since the very beginning of education, neither academicians nor students nor educational administrators have ever taken it seriously. Only in physical education are you allowed to converse while playing or performing. The average public's conception of physical education is one of large circles, nonstop play, and no labor. In one of his speeches, Abraham Lincoln reportedly said, "Sportsman is the finest Ambassador of the Nation." As a result, the Director or Teacher of Physical Education can serve as our institution's or University's finest ambassador.

The Real Definition of Physical Education

Physical education is difficult to define since it encompasses so many various types of occurrences and has such a broad definition that implies different things to different individuals. According to a commenter, physical education is whatever that physical educators do. According to J. P. Thomas, physical education is instruction through physical activities to help children develop their entire selves, finding fulfillment and reaching their full potential in body, mind, and spirit. These definitions have many components in common even if they emphasizes certain characteristics in quite different ways. Some of them might include: A component of the whole educational process is physical education. It is the culmination of all experiences and the corresponding reactions. Knowledge gained these reactions came about as a result of engaging in strong physical activity. The true goal of physical education is the holistic development of the individual, including their physical, mental, social, and moral well-being. The situation is identical to general education. The one area of schooling that may not have received enough emphasis in the Indian setting is physical education. That's probably because we've been content with what the British gave us and haven't demanded anything more.

Genuine attempts on our side to create any practical and comprehensive physical education programmes that are uniquely suited to our circumstances. The academic aspects are constantly emphasized, whereas the physical parts are mostly unaffected. Because of this, a growing number of Indians are ignoring their bodies, comparing physical education to physical training, whose physical fitness is below par, and who are becoming more and more "soft". The maintenance and improvement of the health of the students in our schools and colleges is one of the key goals of any physical education activity.

Additionally, the School has a duty to ensure that all students attain and maintain optimal health, not just from a moral standpoint but also because an individual's educational experience would be significantly more meaningful if they are in optimal condition. When a youngster is healthy, learning comes to him more easily and effectively. Activities that promote or harm one's health often have a lot to do with one's ideals. Unfortunately, a lot of people have "value diseases," meaning they are aware of what they should be doing to be healthy but choose not to. Even though they are aware that smoking tobacco increases the risk of developing lung cancer, they continue to smoke. They are aware of how drinking impairs driving, but they continue to do so when intoxicated. They understand the need of consistent exercise in managing their weight, but they don't do anything to change their sedentary lifestyle. Authorities in education, health, and medicine have long understood the necessity for an Activity for Physical Education is planned into the school curriculum. The foundation of proper habits, attitudes, and appreciations toward all physical activities, including play, are laid during the formative and quickly developing period of elementary school age, and desirable citizenship traits are acquired, so that in adulthood he will be equipped with the knowledge, sound thinking processes, physical stamina, and emotional maturity live effectively in an ever-changing and highly complex society. In this regard, educators have a key role to play in properly addressing this situation. An intellectual pursuit is the devil's factory, so the saying goes.

Conclusion

The idea of three dimensions should guide us in our job. Discipline, devotion, and resolve. The actual riches of the country is its youth. Youth involvement is essential for the success of any programme. Therefore, to ensure the development of physical fitness and learn skills in sports and games that have transferable value, an individual should regularly engage in games, sports, and different exercise programmes. This will enable him to lead a happy, enjoyable, and healthy life as a member of society. On the other hand, society should give its people adequate opportunity to participate in activities of their choosing and therefore improve or maintain their level of physical fitness. Excellence in sports cannot advance until the "General Standard of Health" improves. In order to assure "Improvement of performance in competitive sports" physical education and sports programmes should focus on "Health Related" and "Performance Related" areas. Therefore, the goal of physical education is to encourage the methodical, all-around growth of the human body by scientific methods. Therefore retaining exceptional physical fitness to accomplish one's dearly held life goals. Therefore, any organization of physical education should begin with fostering a positive attitude and sense of self-worth among physical educators themselves. This will help them realize that physical education does not need to be an afterthought in schools or colleges, but rather that it should be expanded into classrooms where it can become the focal point or hub of the educational system.

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EDUCATION'S ROLE IN ECONOMIC GROWTH FOSTERING EMERGING CAREERS

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Abstract

This paper explores the critical role of education in fostering economic growth and preparing students for emerging careers in a rapidly evolving labor market. It highlights the significant relationship between educational attainment and economic performance, while also identifying emerging sectors and the skills required for success in these fields. The study emphasizes the necessity of adaptive educational frameworks that respond to the changing demands of the economy. Through case studies and analysis of challenges, this research aims to provide actionable insights and policy recommendations for stakeholders in education and economic development.

Keywords: Education, Economic Growth, Emerging Careers, Skills Development, Adaptive Educational Frameworks, Policy Recommendations.

1. Introduction

Economic growth is a central objective for governments and societies worldwide, reflecting the increase in the production of goods and services over time, typically measured by the percentage change in real Gross Domestic Product (GDP). Education serves as a fundamental driver of economic growth, enhancing the productivity and innovation capabilities of the workforce. In a globalized and rapidly changing economy, the importance of education in equipping individuals with the skills necessary for emerging careers has never been more critical. As industries evolve and new career paths emerge, it is imperative that educational systems adapt to prepare students for future job opportunities. Research shows a strong correlation between educational attainment and economic performance. Higher levels of education are associated with increased GDP per capita, lower unemployment rates, and improved living standards (Barro & Lee, 2013). Furthermore, the COVID-19 pandemic has accelerated changes in the labor market, emphasizing the need for a workforce that is adaptable and equipped with the skills necessary to thrive in a post-pandemic economy. This paper examines the role of education in promoting economic growth by preparing students for emerging careers. The discussion includes an exploration of relevant theoretical frameworks, the identification of sectors poised for growth, and a review of effective educational strategies. Additionally, the paper presents case studies, highlights challenges facing the education system, and offers policy recommendations for stakeholders.

2. Education and Economic Growth

The relationship between education and economic growth has been well-documented in economic literature. Endogenous growth theories, such as those proposed by Romer (1990) and Lucas (1988), suggest that investments in human capital, particularly through education, lead to innovation and increased productivity. This section will explore the various models that explain how education contributes to economic growth, focusing on the role of technical skills, creativity, and adaptability in emerging industries.

⇨ *Human Capital Theory*

Human capital theory posits that individuals and society benefit from investments in education and training, leading to enhanced productivity and economic growth (Becker, 1993). According to this theory, education increases individuals' knowledge and skills, making them more efficient and effective in their work. The notion of human capital emphasizes that education is not merely a cost but an investment that yields significant returns for individuals and the broader economy.

Investing in education has been shown to produce high economic returns, as educated individuals tend to earn higher wages and contribute more to economic output. Studies indicate that each additional year of schooling is associated with a significant increase in earnings, reflecting the direct link between education and economic success (OECD, 2018). This theory underlines the importance of creating educational systems that prioritize skill development and align with the needs of the labor market.

⇨ *Investment in Education*

Education is viewed as a long-term investment in human capital. The returns on this investment manifest not only in the form of increased individual earnings but also in enhanced national productivity and economic resilience. A well-educated workforce is essential for fostering innovation, attracting foreign investment, and driving economic growth.

According to the World Bank (2020), countries that invest in education experience higher levels of economic growth. The World Development Report highlights that investing in education is vital for improving productivity and fostering economic development, particularly in low- and middle-income countries. Policymakers must recognize education as a priority to ensure sustainable economic growth and development.

⇨ **Economic growth**

Educational initiatives that focus on aligning training with local labor market needs have had a profound impact on regional economic growth. For instance, data from the Georgetown University Center on Education and the Workforce (2019) indicates that regions with robust vocational education programs see lower unemployment rates and higher economic resilience. These programs not only equip individuals with skills but also contribute to the overall prosperity of the community by fostering a skilled workforce.

3. Emerging Careers

☞ *Identifying Emerging Careers*

The global job market is rapidly evolving, driven by technological advancements, demographic shifts, and changing consumer preferences. Several sectors are projected to experience significant growth, presenting new career opportunities for individuals. Key areas include:

- **Technology**: Fields such as software development, artificial intelligence, data science, and cybersecurity are expanding rapidly. The World Economic Forum (2023) predicts that by 2025, 85 million jobs may be displaced by the shift to automation, while 97 million new roles will emerge that are more adapted to the new division of labor between humans and machines.

- **Healthcare**: The demand for healthcare professionals, including nurses, telehealth providers, and health informatics specialists, is on the rise due to aging populations and increasing healthcare needs. The COVID-19 pandemic has accelerated this trend, emphasizing the need for a robust healthcare workforce.

- **Renewable Energy**: As the world transitions to sustainable energy sources, careers in solar technology, wind energy, and sustainability consulting are becoming increasingly prevalent. The

International Renewable Energy Agency (IRENA, 2022) estimates that the renewable energy sector could create millions of jobs in the coming years.

- **Creative Industries**: Digital marketing, content creation, graphic design, and user experience (UX) design roles are expanding as businesses shift their focus towards online engagement and e-commerce.

☞ *Skills Required for Emerging Careers*

To succeed in these emerging fields, students must develop a diverse set of skills, including:

- **Technical Skills**: Proficiency in coding, data analysis, artificial intelligence, and digital marketing tools is essential for careers in technology and data-driven industries.
- **Soft Skills**: Communication, collaboration, critical thinking, and problem-solving abilities are crucial for navigating complex work environments and fostering innovation.
- **Digital Literacy**: As technology becomes increasingly integrated into the workplace, digital literacy is vital for success in virtually all sectors.
- **Lifelong Learning**: With the rapid pace of technological change, adaptability and a commitment to continuous learning are crucial for career longevity. Individuals must be prepared to upskill and reskill throughout their careers to remain competitive in the job market.

4.   Education and Economic Growth through Emerging Careers

⇨ *Curriculum Development*

Educational institutions must adapt their curricula to reflect the evolving demands of the job market. This involves incorporating more STEM (Science, Technology, Engineering, Mathematics) education, interdisciplinary studies, and project-based learning. By focusing on real-world applications, curricula can better equip students with the skills necessary for emerging careers.

- **STEM Education**: Emphasizing STEM education is critical for preparing students for careers in technology and engineering. Schools should implement hands-on learning experiences, such as robotics clubs, coding workshops, and science fairs, to engage students in STEM subjects.
- **Interdisciplinary Studies**: Integrating subjects such as art, technology, and business can foster creativity and innovation, preparing students for careers that require diverse skill sets.
- **Project-Based Learning**: This pedagogical approach encourages students to engage in real-world problem-solving and collaboration, allowing them to develop practical skills and apply their knowledge in meaningful ways.

⇨ *Career Guidance and Counseling*

Effective career counseling is vital in helping students navigate their educational and professional pathways. Schools should implement robust career guidance programs that inform students about emerging career opportunities and the skills required to succeed in those fields. This includes mentorship programs and partnerships with local industries.

- **Mentorship Programs**: Connecting students with industry professionals can provide valuable insights into career paths and help them build networks that will benefit their future employment.
- **Career Exploration**: Schools should provide opportunities for students to explore various career options through internships, job shadowing, and career fairs. This exposure can help students make informed decisions about their future education and career choices.

⇨ *Vocational and Technical Education*

Vocational and technical education (VET) plays a crucial role in preparing students for skilled trades and professions. Programs that offer hands-on training and apprenticeships provide students with

the practical skills needed for immediate employment. Research shows that VET can significantly enhance employment rates and economic mobility for graduates (Schmid, 2015).

- **Apprenticeships**: Apprenticeships combine classroom learning with practical, on-the-job experience, enabling students to gain skills while earning a wage. This model has been successful in various industries, including manufacturing, construction, and healthcare.
- **Partnerships with Industry**: Collaborations between educational institutions and businesses can help align VET programs with labor market needs, ensuring that students acquire relevant skills for high-demand occupations.
- **Coding Bootcamps:** General Assembly and Codecademy have successfully implemented coding bootcamps to quickly train individuals for tech careers, focusing on practical skills and real-world applications, resulting in job-ready graduates with high employment rates and significant salary increases.

5. **Challenges**

Despite the clear benefits of education for economic growth, several challenges persist:

☞ **Funding Inequities**: Disparities in educational funding often lead to unequal access to quality education, particularly in low-income areas. Schools in affluent neighborhoods typically receive more resources, while those in disadvantaged areas struggle to provide adequate educational opportunities.

☞ **Outdated Curricula**: Many educational institutions struggle to keep their curricula current with industry demands. This gap can leave students unprepared for the job market and hinder economic growth.

☞ **Lack of Access to Career Resources**: Many students, especially in underserved communities, lack access to career guidance and mentorship, limiting their understanding of available opportunities and pathways to success.

6. **Policy Recommendations**

To promote education's role in economic growth effectively, policymakers should consider the following recommendations:

- ❖ To Increase Investment in Education Governments should allocate more resources to education.
- ❖ Prioritizing underserved communities to ensure equitable access to quality education.
- ❖ Encouraging lifelong learning programs to promote lifelong learning initiatives.
- ❖ Public-private partnerships between educational institutions and businesses should be encouraged to develop programs that meet the needs of industry and equip students with the necessary skills and experience.
- ❖ To develop robust career guidance programs in schools to help students understand emerging career opportunities and pathways, fostering informed decision-making.
- ❖ Policymakers should advocate for equitable funding for education, ensuring that all students have access to high-quality educational resources and opportunities, regardless of their socioeconomic background.
- ❖ Educational institutions should regularly review and update their curricula to reflect the needs of the labor market.
- ❖ Collaborate with Industry Experts.
- ❖ Enhancing Career Counseling and Internship Opportunities.

7.   Conclusion

Education plays a vital role in driving economic growth by equipping individuals with the skills and knowledge necessary for success in emerging careers. As the labor market continues to evolve, it is essential for educational systems to adapt and respond to the changing demands of industries. By investing in education, reforming curricula, and enhancing career guidance programs, stakeholders can ensure that students are prepared to thrive in the workforce of the future. Policymakers, educators, and industry leaders must work together to create an educational ecosystem that fosters economic growth and prepares individuals for the challenges and opportunities of tomorrow.

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INNOVATING TEACHER PROFESSIONAL DEVELOPMENT & EMPOWERING EDUCATORS: THE ROLE OF NDLI IN TEACHER TRAINING AND DEVELOPMENT

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Abstract

The National Digital Library of India (NDLI) serves as a transformative resource in the realm of teacher training and professional development. NDLI empowers teachers to adapt to evolving educational landscapes and improve their teaching practices. Ultimately, NDLI stands as a vital tool for fostering a culture of lifelong learning among educators, ensuring they are equipped to meet the diverse needs of their students in a rapidly changing world. Continuous Professional Development (CPD) is critical for teachers to remain effective and responsive to the evolving needs of education. The National Digital Library of India as a digital repository, provides a wealth of resources that can significantly support teachers in their ongoing professional growth.

Keywords: Professional Development, Digital Repository, Professional Growth, Continuous Learning, Pedagogical Innovations. Open Access, Quality Materials, Active Learning.

Introduction

The National Digital Library of India, launched by the Ministry of Education, aims to address these challenges by providing a comprehensive digital platform that democratizes access to educational materials. By offering a vast repository of resources—including textbooks, research papers, multimedia content, and professional development courses—NDLI serves as a vital tool for educators seeking to improve their skills and knowledge. In today's fast-paced educational environment, the role of teachers has evolved beyond traditional instruction to encompass a wide range of responsibilities, including adapting to technological advancements, understanding diverse student needs and implementing innovative teaching methodologies.

Continuous professional development is essential for educators to stay current with these changes and enhance their effectiveness in the classroom. However, many teachers face significant barriers to accessing quality resources and training opportunities, particularly in under-resourced areas. NDLI contributes significantly to the professional growth of teachers, ensuring they are better equipped to meet the diverse needs of their students in an ever-evolving educational landscape.

NDLI Need for Education

The National Digital Library of India addresses a critical need in the Indian education system by providing equitable access to a vast array of digital resources. The primary needs it full fills include:

1. Democratizing Access to Educational Resources

Access to quality educational materials has traditionally been limited by geographic, economic, and infrastructural barriers. Students and educators in rural or underserved regions often face challenges in accessing textbooks, research papers, and other academic resources.

2. Supporting Lifelong Learning

Continuous learning is essential for personal and professional growth, especially in rapidly changing fields. However, access to resources for lifelong learning is often constrained by cost and availability. Free, 24/7 access to resources across all educational levels, supporting not only students but also professionals seeking to up skill and educators needing professional development.

3. Enhancing Teacher Training and Development

NDLI offers a wealth of teacher training materials, research publications and instructional aids, empowering educators with the knowledge and tools to enhance their teaching practices.

4. Bridging Knowledge Gaps

By providing up-to-date content from top educational institutions and research bodies, NDLI helps bridge these gaps and ensure that students and educators can access cutting-edge information.

5. Facilitating Research and Academic Collaboration

NDLI provides access to academic publications from institutions across the globe, facilitating research, collaboration and knowledge sharing among scholars and educators.

6. Catering to Diverse Learning Needs

NDLI offers resources in multiple languages and across a wide range of subjects, from basic educational materials to advanced research, catering to the diverse academic needs of its users.

NDLI: A Comprehensive Resource for Educators

The NDLI is an extensive digital repository that serves as a valuable resource for educators, offering access to a wide variety of educational materials. Its vast collection is tailored to meet the needs of teachers, students and educational institutions, making it a key tool in enhancing teaching and learning processes. Here are the key aspects of how NDLI benefits educators:

1. Access to Diverse Educational Content

NDLI offers access to millions of educational resources, including e-books, research papers, theses, video lectures, presentations and courseware. This wide range of materials caters to different educational levels—from primary education to higher education. Teachers can use up-to-date resources that complement their curriculum, allowing them to enhance lesson plans and provide students with diverse learning materials.

2. Free and Open Access to Quality Materials

NDLI provides free access to high-quality, peer-reviewed materials from top institutions across the world. This allows educators to access academic resources that would otherwise require subscriptions or expensive licenses. Teachers, especially those in under-resourced areas, can access premium educational content without financial barriers, supporting their professional development and classroom teaching.

3. Continuous Professional Development (CPD) Resources

NDLI supports Continuous Professional Development (CPD) by providing educators with access to professional development courses, teaching guides, educational research and learning modules on modern teaching strategies, pedagogy and educational technology. Teachers can use these resources to improve their teaching skills, learn new pedagogical methods, and stay updated on the latest developments in education.

4. Support for Subject-Specific Knowledge Enhancement

NDLI's extensive collection of subject-specific content covers a wide range of fields such as science, technology, mathematics, social sciences and the humanities. Teachers can deepen their expertise in their subject areas, which is crucial for ensuring accurate and comprehensive teaching in the classroom.

5. Multilingual and Inclusive Resources

NDLI offers resources in multiple languages, making it inclusive for educators and students from various linguistic backgrounds. This is particularly valuable in India, where teachers cater to students who speak a wide range of languages. Teachers can find materials in the language that best suits their students, ensuring that resources are accessible and relevant to their specific teaching contexts.

6. Curriculum-Aligned Content

Curates content that aligns with national and regional curricula, ensuring that teachers can find materials that are directly relevant to the syllabus they are teaching. This alignment saves teachers time and effort, as they can find ready-to-use resources that fit into their lesson plans and classroom activities.

7. Research and Collaboration Opportunities

Educators can use NDLI to stay connected with the latest research in education and other fields. The platform provides access to academic journals, conference proceedings and collaborative platforms where educators can engage with other professionals

8. Classroom Resources for Active Learning

Provides interactive resources, including videos, tutorials and virtual labs which can be incorporated into classroom teaching to make learning more engaging and interactive. These materials can be used to support a variety of teaching methods, from flipped classrooms to blended learning, helping teachers create more dynamic and interactive lessons.

9. Personalized Learning and Resource Suggestions

NDLI uses advanced algorithms to suggest personalized resources based on the user's needs and interests. This feature ensures that educators can find relevant materials quickly and efficiently. Teachers can receive tailored suggestions for lesson planning, professional development and classroom activities based on their specific interests or subject focus.

10. Promoting Lifelong Learning

NDLI encourages lifelong learning by providing resources for educators to continuously improve their knowledge, skills, and teaching strategies.

Impact of NDLI on Teacher Training

The NDLI has had a significant impact on teacher training by offering a wide range of resources and tools that support professional development and enhance teaching practices. As a comprehensive digital repository, NDLI plays a key role in modernizing teacher training programs across India. Here are several ways in which NDLI positively influences teacher training:

1. Access to a Vast Repository of Resources

NDLI offers access to millions of academic resources, including e-books, journals, research papers and teaching materials across various subjects and disciplines. This vast repository is invaluable for teacher trainees to enhance their knowledge base and teaching methodologies. Trainee teachers can access high-quality, curriculum-aligned resources, giving them the tools to prepare for lessons and stay updated with subject-specific developments.

2. Support for Continuous Professional Development (CPD)

Continuous learning is essential in teaching. NDLI supports CPD by providing resources that help teachers stay updated on new pedagogical strategies, technological integration and curriculum changes. Teachers in training benefit from ongoing access to professional development materials, ensuring they are prepared to adapt to modern classroom demands and innovations.

3. Multidisciplinary Content for Holistic Training

NDLI offers resources across multiple disciplines from science and mathematics to social sciences and the arts. This broad spectrum of content ensures that teacher trainees receive a well-rounded education. Teachers in training can broaden their subject knowledge and interdisciplinary understanding, which is crucial in today's education system that emphasizes critical thinking and cross-curricular connections.

4. Incorporation of Digital and Blended Learning Methods

As education shifts toward digital and blended learning models, NDLI provides materials on how to effectively integrate technology into teaching. This includes multimedia content, e-learning modules and tutorials on using digital tools in the classroom. Teachers in training are better equipped to use technology in their future classrooms, enhancing their digital literacy and preparing them to teach in tech-enabled environments.

5. Access to Research and Pedagogical Innovations

NDLI offers a collection of the latest research papers, theses and articles on pedagogical innovations. Teacher trainees can explore new teaching models, classroom management strategies and assessment techniques, allowing them to stay at the forefront of educational best practices. Access to current research ensures that teacher trainees are exposed to evidence-based teaching strategies, fostering an understanding of what works best in the classroom.

6. Free and Inclusive Learning Opportunities

One of NDLI's key benefits is that it provides free and open access to a wealth of educational materials. This inclusivity ensures that teacher trainees from diverse socio-economic backgrounds can access world-class resources without financial barriers. NDLI democratizes access to educational resources, ensuring that teacher trainees from all regions and institutions can benefit equally from high-quality materials, regardless of their location or financial situation.

7. Curriculum-Aligned Resources for Teacher Education Programs

NDLI curates content that aligns with teacher education curriculums, including B.Ed., M.Ed., and other teacher training programs. This ensures that the materials are directly relevant to teacher trainees' academic needs and future professional requirements. NDLI supports the structured development of teacher trainees, helping them meet course requirements and gain practical teaching knowledge.

8. Collaborative Learning and Networking

NDLI can serve as a platform for collaborative learning among teacher trainees, allowing them to access group projects, participate in discussions and share teaching resources. Teachers in training can collaborate with peers, build professional networks, and engage in group learning experiences, enhancing their teamwork and communication skills.

9. Enhancing Pedagogical Skills through Case Studies and Examples

NDLI offers access to real-world case studies, teaching experiences and lesson plans that help teacher trainees apply theoretical concepts to practical classroom scenarios. Teacher trainees can study real-life examples of classroom management, student engagement and lesson planning, improving their practical teaching skills and readiness for real classroom settings.

10. Promoting Reflective Practice

NDLI provides resources on reflective teaching practices, encouraging teacher trainees to critically assess their teaching methods, classroom interactions and student outcomes. Reflective practice is essential for continuous improvement in teaching. By accessing materials that promote self-reflection, teacher trainees learn to evaluate and improve their teaching approaches over time.

11. Support for Multilingual Education

With its multilingual resources, NDLI caters to teachers working in various linguistic environments. Teacher trainees can access materials in multiple Indian languages, helping them prepare for teaching in diverse linguistic settings. NDLI helps teacher trainees develop culturally and linguistically relevant teaching strategies, which is essential in India's multilingual education landscape.

Challenges and Limitations of the NDLI

While the **NDLI** is a powerful resource that has significantly contributed to improving access to education, it also faces several challenges and limitations. Understanding these issues is important for addressing them effectively and enhancing the platform's ability to meet the diverse needs of users. Below are some of the key challenges and limitations faced by NDLI:

*1. **Digital Divide and Access to Technology***

Many potential users, especially in rural and economically disadvantaged areas, lack access to reliable internet connections, computers or smart phones. This digital divide limits the ability of students and teachers in these areas to fully benefit from NDLI's digital resources.

2. Awareness and Adoption

Many educators and students are either unaware of NDLI's existence or do not know how to effectively use its vast resources. This lack of awareness and low digital literacy, especially in remote areas, hinders the adoption of NDLI's services.

3. Content Overload and Navigation Difficulties

NDLI offers an enormous repository of resources, which can sometimes be overwhelming for users. Finding relevant materials can be difficult, especially for those unfamiliar with digital libraries or academic databases.

4. Quality Control and Curation

While NDLI hosts a large volume of content, ensuring consistent quality across all resources can be challenging. Some materials may be outdated, not peer-reviewed, or of varying academic rigor, which can affect the quality of learning.

5. Language Barriers

Although NDLI offers resources in multiple languages, a significant portion of its content is available only in English. This can be a barrier for students and teachers who are more comfortable in regional languages or are less proficient in English.

6. Limited Interactive Features and Engagement Tools

NDLI provides a vast collection of static educational resources like e-books, research papers, and journals, it lacks interactive learning tools and features, such as discussion forums, quizzes, or collaborative learning platforms.

7. Updating and Maintaining Content

With the rapid pace of educational and technological advancements, keeping the NDLI content current and relevant can be challenging. Some materials may become outdated or irrelevant over time if not regularly updated.

8. Lack of Focus on Skill-Based and Vocational Training

NDLI focuses extensively on academic resources, there is relatively less content on vocational training, skill development, and career-oriented learning, which are crucial for many students seeking employment or practical skills.

9. Insufficient Personalization for Diverse Learning Needs

NDLI, despite its vast content, does not offer personalized learning paths for users based on their individual needs, academic progress or learning styles. The platform's recommendation system could be improved to cater to users at different educational levels.

10. Limited Offline Access

Most of NDLI's resources require internet access, limiting the platform's usefulness in regions with poor connectivity or for users without continuous access to the internet.

11. Legal and Copyright Issues

NDLI hosts a wide range of academic content, some of which may face copyright restrictions. Managing intellectual property rights and ensuring compliance with copyright laws can be complex, especially when hosting content from various sources.

12. Lack of Institutional Integration

Despite NDLI's potential, many educational institutions have not fully integrated the platform into their teaching and learning systems. This lack of institutional support limits the platform's adoption at the classroom level.

Future Directions for the NDLI

As the NDLI continues to evolve, there are several future directions and opportunities for improvement that can help maximize its impact on education. To address current challenges and further enhance its role in democratizing access to knowledge, the platform can adopt new strategies and innovations. Here are some key areas for future development:

1. Improving Digital Access and Infrastructure

Expanding access to NDLI through improved digital infrastructure is essential for reaching students and teachers in remote or underserved areas. Partnering with government initiatives and private sector organizations to provide affordable internet access, devices, and digital literacy programs could bridge the current digital divide.

2. Increasing Awareness and Adoption

NDLI needs to increase awareness of its platform among students, teachers, and institutions. A national campaign to promote NDLI through educational institutions, government programs, and social media could significantly boost user adoption.

3. Developing Multilingual and Regional Content

Expanding NDLI's content offerings in regional languages is critical for reaching non-English-speaking users and making the platform more inclusive. Developing resources in more Indian languages and ensuring quality translations of existing materials could cater to the linguistic diversity of India.

4. Enhancing User Experience and Personalization

Improving NDLI's user interface (UI) and experience (UX) is vital for ensuring that users can easily navigate the platform and find relevant materials. Introducing enhanced search functionality, personalized learning paths, and recommendation systems based on user preferences and learning levels will make the platform more user-friendly.

5. Interactive and Engaging Learning Tools

Incorporating interactive learning tools such as quizzes, virtual simulations, discussion forums, and collaborative learning spaces would make NDLI more engaging for students. These tools can foster active learning, participation, and collaboration, moving beyond static reading materials.

6. Strengthening Vocational and Skill-Based Training

NDLI could expand its offerings in vocational education, skill-based learning, and career-oriented content to meet the growing demand for employability-focused education. Collaborations with industry experts and institutions providing vocational training could help fill this gap.

7. Offline Access and Mobile Optimization

Enhancing the platform's offline functionality by enabling users to download and access resources without an internet connection is crucial for users in regions with unreliable connectivity. NDLI should also continue optimizing its mobile application to ensure that users can access resources on smartphones, which are more prevalent than computers in many areas.

8. Collaborations with Educational Institutions

NDLI can strengthen partnerships with schools, colleges, and universities to integrate its resources into formal education systems. Creating specialized portals for institutions, where faculty and students can access curated content, would promote greater use of NDLI in classroom teaching and research.

9. Quality Control and Curation

To address concerns about content quality, NDLI should establish stronger mechanisms for content curation and quality assurance. Partnering with academic experts to regularly review and update content will ensure that resources are accurate, up-to-date, and relevant.

10. Artificial Intelligence (AI) for Personalized Learning

NDLI could leverage artificial intelligence (AI) to create more personalized learning experiences. AI algorithms can analyze user behaviour to recommend personalized content, create adaptive learning pathways, and provide tailored feedback to users.

11. Expanding Research and Academic Collaboration

NDLI could develop platforms for academic collaboration, allowing researchers to share ideas, resources, and publications more easily. This could include creating online communities for subject-specific discussions and research projects.

12. Incorporating Cutting-Edge Technologies

Emerging technologies such as virtual reality (VR), augmented reality (AR), and gamification can be integrated into NDLI to enhance learning experiences. These technologies could provide immersive learning experiences in fields like science, history, and geography.

13. Addressing Legal and Copyright Issues

NDLI can collaborate with publishers, authors, and institutions to resolve copyright issues and make more materials freely available. Implementing a transparent copyright management system will enable NDLI to offer more high-quality, legally accessible content.

14. Tracking and Measuring Impact

NDLI can implement more sophisticated data analytics to track user engagement, resource utilization, and learning outcomes. These insights can be used to improve the platform and better understand the needs of users.

Conclusion

By addressing the diverse needs of teachers across India, including those in under-resourced areas, NDLI helps bridge the gap in access to quality professional development. It democratizes knowledge by making valuable teaching resources available to all educators, regardless of geographic or economic barriers. The platform also encourages continuous learning, helping teachers improve their instructional methods, stay informed about the latest educational trends, and incorporate new strategies into their classrooms.

As the landscape of education evolves, NDLI's role in teacher training and development will become even more crucial. The platform's future enhancements—such as personalized learning paths, interactive tools, and increased multilingual content—will further equip educators to meet the challenges of modern teaching. Ultimately, NDLI's efforts to empower educators contribute to building a more informed, capable, and innovative teaching workforce, which in turn positively impacts the quality of education delivered to students across the country. NDLI's commitment to supporting teacher development not only strengthens individual educators but also fosters a culture of continuous improvement and excellence in education, which is essential for shaping the future of learning in India.

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A COMPARATIVE STUDY OF AGGRESSION AMONG KABADDI PLAYERS IN KALYANA KARNATAKA AND NON-KALYANA KARNATAKA

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Abstract

These days, sports psychology stands on its own within the vast field of sports science. The focus is on the physiological mechanisms that regulate behavior in athletic situations. The purpose of this investigation was to quantify the aggressiveness of male intercollegiate college Kabaddi players from the Kalyana Karnataka and non-Kalyana Karnataka regions. Of the 24 male collegiate sports persons included in the study, 12 played Kalyana Karnataka and 12 played non-Kalyana Karnataka regions. The participants' ages ranged from 25 to 27. The Buss-Perry Aggression Questionnaire, a 29-item tool that gauges four characteristics-physical aggression, verbal aggression, hostility, and anger was used to gauge the level of aggression among collegiate-level Kabaddi players. We used the data's mean, standard deviation, and independent samples t-test to search for differences in levels of aggression in sports. Researchers found that the level of aggression displayed by Kalyana Karnataka and non-Kalyana Karnataka regions Kabaddi players was significantly different.

Keywords: Kalyana Karnataka, Non-Kalyana Karnataka, VerbalAggression, Physical Aggression, Hostility, Anger.

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1. Introduction

Sports and games have a huge impact on an individual's thought patterns. In the specialized area of competitive sports psychology, there is a negative correlation between aggression and peak performance. Anger can cause harm to living things, nonliving things, or even one's own body. Aggression can take many forms, including physical, emotional, and verbal. According to the Merriam-Webster dictionary, Aggression is characterized by a hostile, destructive, or hurtful attitude or behavior that is often prompted by anger. India may be the homeland of Kabaddi. The Mahabharata utilizes kabaddi, the "game of the masses," to signify power and fortitude. However, a unique culture or community is the original developer of indigenous games. Traditional sports, on the other hand, follow established rules and are regulated by international federations.

A thrilling team sport with its roots in India, Kabaddi has gained international renown for its test of mental toughness, strategic acumen, and physical strength. The appeal of the game is based on the fact that it is quite demanding, providing players with substantial mental and physical challenges that, when overcome, provide an exciting and satisfying experience (Jain, 2013).

Technical proficiency, physical conditioning, and psychological attributes such as competitive aggression are but a few of the numerous aspects that affect a Kabaddi player's performance. Aggressive behaviour exhibited by athletes during competition can adversely affect their performance (Anderson & Dill, 2000). Given that physical contact and tactical dissent are fundamental to Kabaddi, hostility significantly influences a player's performance and ability to surpass their adversaries.

The Kalyana-Karnataka region, formerly known as Hyderabad-Karnataka, is located in the Indian state of Karnataka. It was previously part of the British Madras Presidency and the Nizami-ruled Kingdom of Hyderabad. The region comprises seven underprivileged districts in Northern Karnataka: Kalburgi, Bidar, Raichur, Koppal, Yadgir, Bellary, and Vijayanagara. The Hyderabad-Karnataka area was granted specific safeguards under Article 371-J by the 98th Constitutional Amendment Act of

2012.The term "non-Kalyana Karnataka districts" describes the districts in Karnataka that are not located in the Kalyana region.

2. Purpose of the Study

The study aimed to compare levels of aggression in intercollegiate Kabaddi players who are winners from both the Kalyana Karnataka and non-Kalyana Karnataka regions.

3. Methodology

To fulfill the study's objectives, information was gathered from 24 kabaddi players. These athletes were drawn from both the Kalyana Karnataka and non-Karnataka region universities, encompassing winners at the intercollegiate level in Kabaddi. The age range of the subjects was 18-27 years.

4. Statistical Technique

The data was analyzed using SPSS and the "t" test method for statistical analysis.

5. Results

After the data was examined within the study's limitations, the findings are presented in the following tables.

Table 1: The number of respondents collected from winners of Kalyana Karnataka and Non-Kalyana Karnataka universities inter-collegiate tournament.

Kalyana Karnataka(KK) (12)	Non-Kalyana Karnataka (NKK) (12)
Kabaddi	Kabaddi
12	12

Table 2: Shows Mean, standard deviation and "t" value of Physical Aggression variable Kabaddi players from Kalyana Karnataka and Non- Kalyana Karnataka

Variables	Groups	N	Mean value	Standard deviation	't' value	Sig.
Physical Aggression	KK Kabaddi	12	36.2500	2.45412	3.455	.005
	NKK Kabaddi	12	32.5833	3.08835		

*significant at 0.05 level.

The above table indicates the mean value, standard deviation and "t" value of Physical Aggression variable Kabaddi players from Kalyana Karnataka (KK) and Non- Kalyana Karnataka (NKK). In this variable Kalyana Karnataka (KK) Kabaddi players have shown significant difference than Non-Kalyana Karnataka (NKK) kabaddi players.

Table 3 Shows Mean, standard deviation and "t" value of Verbal Aggression variable Kabaddi

Variables	Groups	N	Mean value	Standard deviation	't' value	Sig.
Verbal Aggression	KK Kabaddi	12	19.9167	1.92865	3.887	0.003
	NKK Kabaddi	12	24.0833	2.64432		

players from Kalyana Karnataka and Non- Kalyana Karnataka

*significant at 0.05 level.

The above table indicates the mean value, standard deviation and "t" value of Verbal Aggression variable Kabaddi players from Kalyana Karnataka (KK) and Non- Kalyana Karnataka (NKK). In this

variable Kalyana Karnataka (KK) Kabaddi players have shown significant difference than Non-Kalyana Karnataka (NKK) kabaddi players.

Table 4: Shows Mean, standard deviation and„t" value of Anger variable Kabaddi players from Kalyana Karnataka and Non- Kalyana Karnataka

Variables	Groups	N	Mean value	Standard deviation	't' value	Sig.
Anger	KK Kabaddi	12	27.2500	2.09436	5.777	0.001
	NKK Kabaddi	12	24.0833	2.64432		

*significant at 0.05 level.

The above table indicates the mean value, standard deviation and„t" value of Anger variable Kabaddi players from Kalyana Karnataka (KK) and Non- Kalyana Karnataka (NKK). In this variable Kalyana Karnataka (KK) Kabaddi players have shown significant difference than Non-Kalyana Karnataka (NKK) kabaddi players.

Table 5: Shows Mean, standard deviation and "t" value of Hostility variable Kabaddi players from Kalyana Karnataka and Non- Kalyana Karnataka

Variables	Groups	N	Mean value	Standard deviation	't' value	Sig.
Hostility	KK Kabaddi	12	28.1667	2.58785	3.326	0.007
	NKK Kabaddi	12	24.0833	2.99874		

*significant at 0.05 level.

The above table indicates the mean value, standard deviation and„t" value of Hostility variable Kabaddi players from Kalyana Karnataka (KK) and Non- Kalyana Karnataka (NKK). In this variable Kalyana Karnataka (KK) Kabaddi players have shown significant difference than Non-Kalyana Karnataka (NKK) kabaddi players.

Table 6. Descriptive statistics of between winners of Kalyana Karnataka and Non-Kalyana Karnataka universities inter-collegiate tournament.

	Group statistics					
Game name	Region	N	Mean	Standard deviation	't' value	Sig.
Kabaddi	Kalyana Karnataka	12	115.7500	4.47468	5.915	.001
	Non-Kalyana Karnataka	12	102.4167	5.93079	5.915	.001

*significant at 0.05 level.

The above table indicates the mean value, standard deviation and„t" value of Aggression level of Kabaddi players from Kalyana Karnataka (KK) and Non- Kalyana Karnataka (NKK). In this variable

Kalyana Karnataka (KK) Kabaddi players have shown significant difference than Non-Kalyana Karnataka (NKK) kabaddi players.

6. Discussion on Findings

The above result shows that there is a significant difference in the psychological variable such as physical aggression, verbal aggression, hostility, and anger Kabaddi players from Kalyana Karnataka and Non- Kalyana Karnataka region.

Kalyana Karnataka region kabaddi players have shown more aggression compared to the players of Non-Kalyana Karnataka region because of their life style, food habits, socio-economic status and weather conditions.

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NEP- TRANSFORMING SCHOOL EDUCATION THROUGH ITEP

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Abstract

The Integrated Teacher Education Programme (ITEP), a flagship initiative under the National Education Policy (NEP) 2020, has been introduced by the National Council for Teacher Education (NCTE). To educate teachers for the Foundational, Preparatory, Middle, and Secondary (5+3+3+4) stages of the new school system, this four-year undergraduate degree with dual majors offers B.A. B.Ed./B. Sc. B. Ed. and B.Com. B.Ed. Entry into the program will be via the National Testing Agency's National Common Entrance Test (NCET). Teaching aptitude,domain-specific courses, languages, and a general test will make up the four portions of the exam. At 42 state and central universities around the nation, the program has already been in pilot mode since the previous academic year. Following their completion of their formal education, it hopes that young adults who have a strong passion to teach would apply to the program. Dual major degrees are available through the program. It denotes that all of the pathways connected to each major covered in this program are available to the students. Students' development in all areas is guaranteed by the program, which also gives them a solid foundation in understanding intersectionality in both professional and liberal disciplines. The program aims to transform teacher preparation in India through its vision and design. This paper establishes the relation and transformation from the (10+2) pattern of school education to (5+3+3+4) pattern of school education. This paper also exhibits the overview of the programme, challenges and strategies of implementation of ITEP in India that to in school education.

Introduction:

   Teaching is regarded as the noblest vocation among all others since teachers directly contribute to national development, which is reliant on the nation's educational system. Educated nations have been seen to be progressing quickly in a variety of sectors, including astronomy, communication, technology, engineering, medicine, and agriculture. A country's social and economic prosperity can only come from investing in education, which consistently yields significant returns. As civilisation began to form, there have been educational institutions in India (Keay, 1972). thus it is a blessing for us Indians to have sacred texts like the Puranas, the Adventures of Ramayana, the Upanishads, and the Rigveda;In order to continue developing the educational system, the Indian government placed a high priority on education after gaining independence. As a result, several education commissions were established, including the University Education Commission in 1948, the Mudaliar Commission in 1952, the Indian Education Commission (1964–1966), the National Policy on Education (1968, 1986, and 1992), the Sarva Shiksha Abhiyan (SSA, 2000–2001), the Right to Education Act (2009), and the most recent, the National Education Policy 2020. Since the beginning of education, the history of the teacher education program has existed, and revisions to the curriculum have been made periodically. For students who aspire to become teachers in the future, the NCTE has introduced the ITEP teacher education program. It's a four-year, specially designed integrated degree program where students study general courses like B.A. or B.Sc. for the first two years, and then study teacher education for the final two years. This allows students to save a year, and upon program completion, they will receive a degree like B.A. or B. Sc. along with B. Ed. In NEP 2020, the four-year ITEP began in the 2022–2023 academic year in some states of India.

Objectives of the study:
- ➢ To understand the idea behind and operational mechanism of the Integrated Teacher Education Programme (ITEP).
- ➢ The Institutions are going to establish policies to ensure the successful implementation of ITEP.

Overview of ITEP:
- ➢ The Integrated Teacher Education Program (ITEP) has been introduced by the National Council for Teacher Education (NCTE) in 57 Teacher Education Institutions (TEIs) across the nation for the academic year 2023–2024. Under NEP 2020, this is NCTE's main program. The four-year dual-major holistic undergraduate program ITEP, announced on October 26, 2021, offers B.A. B.Ed./B. Sc. B. Ed. and B.Com. B.Ed. Teachers will be ready for the Foundational, Preparatory, Middle, and Secondary (5+3+3+4) phases of the new school system with this course. Reputable Central and State Government Universities and Institutions are the first to offer the program in a pilot program. ITEP will be accessible to all students who voluntarily decide to pursue a career in teaching following secondary school. Students will profit from this integrated course since they will complete it in four years instead of the five years that the current B.Ed. plan requires, saving them a year. Through the National Common Entrance Test (NCET), the National Testing Agency (NTA) will administer admission for the same.

According to NEP 2020, students who wish to teach in the future should enrol directly in a four-year integrated teacher education program after receiving their high school diploma. Upon completion of the program, they will receive a bachelor's degree in addition to a professional degree in teacher education, such as a B. Ed education. A student may continue his studies if, at a later time, he decides to seek a master's degree. Many options are available to students in ITEP. For example, students do not need to complete four years in order to receive a degree; instead, they can receive a certificate after one year, a diploma after two years, and an honours degree after four years.It has been stated that students will have up to six years to finish their course of study within the four-year ITEP, which consists of eight semesters. The Ministry of Education's NCTE created the ITEP curriculum, which allows students to earn a degree in education as well as a specialised subject like history, math, science, art, economics, or commerce. They will also learn Indian values and customs, morality, and how to be a good person in general. Furthermore, the National Testing Agency (NTA) will administer the National Common Entrance Test (NCET) to qualifying candidates before the institutions may admit students under the ITEP.

Modern pedagogy will be taught in ITEP, along with a foundation in inclusive education, foundational literacy and numeracy (FLN), early childhood care and education (ECCE), and an awareness of India and its customs, beliefs, and ethos. The course will make a significant contribution to the sector's overall revitalisation in teacher education. The future educators who complete this course in a multidisciplinary setting based in Indian customs and values will be equipped with the demands of global standards for the twenty-first century, and as such, they will be the ones guiding the development of New India.

Challenges of implementing ITEP:
- Curriculum transformation
- Enhancement of quality of teachers
- Technology adoption
- Merging of both disciplinary and Education subjects

- Teaching methodologies
- Infrastructure facilities
- Practical implementation of theoretical aspect

Strategies of implementing ITEP:

- Need based teaching
- Proving practical platform for better and excellent learning
- Technological utilisation and adoption in teaching
- Conduct Training programmes to faculty members for merging Two year B.Ed and 4 year B.Ed.
- Frame National curriculum framework-Only one frame
- Choice for student teachers to choose the level based on their interest.
- Training for Inclusive platform
- Training for vocational benefits
- Trainnig for skill oriented teaching.
- Training for individualness and independentness
- Enhancement of own potentialities.

Conclusion:

Based on School Education pattern, Teacher education programme also must change. According to New pattern of Education (5+3+3+4), We need to provide the platform for pee-service teacher education programme in different levels. Means ITEP for Foundation level, Preparatory stage, Primary stage and Secondary stage. Each stage having its own importance and fruitfulness. So in teacher education programme, trainee teachers must having the choice to select the stream that may me foundation or secondary level. Each stage have different methodology platforms, teaching platforms, different practical experiences, technological adoption based on the stage and age of the student,so according to the school education wise we must modify the ITEP programme based on the age,need,and interest of trainee teachers.Through this we can expect the quality of teacher education programme as well as school education throughout nation.

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CONCEPT OF INCLUSIVE EDUCATION IN SCHOOL LEVEL

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Abstract

Successful inclusive education happens primarily through accepting, understanding, and attending to student differences and diversity, which can include physical, cognitive, academic, social, and emotional. This is not to say that students never *need to spend time out of regular education classes, because sometimes they do for a very particular purpose for instance, for speech or occupational therapy. But the goal is this should be the exception. The driving principle is to make all students feel welcomed, appropriately challenged, and supported in their efforts. It's also critically important that the adults are supported, too. This includes the regular education teacher and the special education teacher, as well as all other staff and faculty who are key stakeholders and that* also *include parents. Hence, the present conceptual paper on Inclusive education in School level, it focuses on its meaning, definition, principles of inclusive education, Scope of inclusive education, problems of inclusive education and best practices for inclusive education in school level.*

***Key terms;-** Inclusive Education, concepts, principles, best practices, etc*

INTRODUCTION

For over a century, the prevalent model of offering education to children with special needs has been the special schools with major drawbacks- it is expensive and has only limited reach. Moreover segregation children based on disability is a violation of the human rights. Subsequently, the philosophy of integration emerged which advocated education of children with moderate disabilities in general schools along with others with adequate support. But children under integration are treated separately in schools and integration or mainstreaming is only partial. This led to the emergency of a new concept called "Inclusive Education" which argues that all children respective of the degree of the disability should be educated in the general schools with normal children. Integrated Education is about "going to school" where as Inclusive Education is about "Participating in school". Inclusive Education is more in true with the social model of disability which sees the system as the problem. The school and the education system as a whole are enabled to change in order to meet the individual needs of all learners.

MEANING AND CONCEPT OF INCLUSIVE EDUCATION

Inclusive education is not just another option in the special education programme rather it is a very different way of providing education to all students. It is an approach to education where students with special needs including disabilities are educated in neighborhood schools in age-appropriate regular classroom settings with non disabled peers, and are provided with supports and instruction that assures their participation with their peers, while also meeting their individual strengths and needs.

Inclusive education is defined as a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning, cultures and communities and of reducing exclusion within education. Inclusive education is a commitment to seeing education as fundamental to development both of individuals and of societies.

It implies all learners, young people- with or without disabilities being able to learn together through access to common preschool provisions, schools and community educational setting with an appropriate network of support services. Literally the meaning of Inclusion is "to include the diversified entities.

As far education is concerned, Inclusion refers to the placement and education to the children with disabilities in regular education classrooms, with children of the same age who do not have disabilities.

Overall inclusive education is the provision of services to students with disabilities in their neighborhood schools with necessary support services and supplementary aids for both children and teachers. It is a system in which all children from a given community learn together in a same local school including children with learning difficulties, special needs or disabilities. It involves all children learning together with the peers in the same environment and enables all to participate together in the society from the very beginning.

DEFINITIONS OF INCLUSIVE EDUCATION

Sometimes the concept of inclusive education is considered as same as with the concept of integrated and mainstreaming. But the concept of inclusive Education is a different concept from the concept of integrated and mainstreaming.

Now we will be clear about the same by providing definitions given by eminent scholars and psychologists. "Mainstreaming refers to the temporal, instructional and social integration of eligible exceptional children with normal peers based on an ongoing, individually determined, educational planning and programming process and requires clarification of responsibilities among regular and special education, administrative instructional and supportive personnel."

1. **Kauffman** "The term mainstreaming is used to mean an integration of regular and exceptional children in a school setting where all children share the same resources and opportunities for learning and full time basis."

2. **Beng "**At the level of Education the integration of a disabled child into a regular classroom situation means a concurrent education with a class of non disabled children. In such a set up there are greater opportunities for the handicapped child to mix with his non disabled counterparts in games, sports and other activities. The aim of integrated education is to assimilate a disabled child into a group of non disabled and providing opportunities to make his/her as independent as possible."

3. **Rehman Hiffr** "Mainstreaming is the education of mildly handicapped children in the regular classroom. It is based on the philosophy of "equal opportunity" implemented through individual planning to promote appropriate learning achievement and social normalization"

Principles and Characteristics of Inclusive Education

Recognizing Education for all children as a fundamental right, to ensure the inclusion of children and youth with disabilities in all available mainstream educational setting, by providing them with a learning environment that is available, accessible, affordable and appropriate to help develop their learning and abilities as inclusive education means a philosophy of education that promotes the education of all pupils in regular schools. The principles of this philosophy are based on the following assumptions.

➢ All children have right to learn and play together.
➢ Children in inclusive setting have more durable networks of friends than children in segregated setting. xx. It aims in developing a system by which abstract concept are effectively
➢ Children should not be devalued or discriminated against by being excluded or sent away because of their disabilities.
➢ In inclusive education, strengths and abilities of all children are developed rather than highlighting limitations.

- ➤ Inclusive education makes the curriculum flexible and appropriate to accommodate the diversity of school children including those with disabilities in both cognitive and non cognitive areas.
- ➤ It is an effort to provide equal education opportunity to the disabled and to prepare them for independent living like other member of society.
- ➤ It promote individualized educational programme for those who require an individualized pace of learning.
- ➤ It promotes an understanding of the paradigm shift from charity to development through a massive awareness, motivation and sensitization campaign.
- ➤ It provides a mechanism for responding to the learning and other needs of all learners as soon as they are suspected or identified.
- ➤ It provides an opportunity for assessing the short and long term needs of teachers and the possibilities for school based training, workshop and seminars.
- ➤ It utilizes resources in and around the school.
- ➤ The model provides the opportunity for teachers to learn from one another and to work collaboratively.
- ➤ There are no legitimate reasons to separate children during the duration of their schooling. They belong together rather than need to be protected from one another

The Scope of Inclusive Education:-

The concept of Inclusion is often discussed as though it applies only to Special Educational Needs (SEN), but it has much wider scope. According to Booth and Ainscow (2000) inclusion in education involves:

- ➤ Valuing all students and staff equally.
- ➤ Reducing student's exclusion from schools and focusing their increase participation in the cultures, curricula and communities of local schools.
- ➤ To respond to the diversity of students in the locality, there is a need for restructuring the culture, policies and practices in schools.
- ➤ Reducing barriers to learning and participation for all students in the schools. Especially those who are categorized as having special educational needs.
- ➤ Learning from attempts to overcome barriers to the access and participation of particular students to make changes for the benefit of students more widely.
- ➤ Viewing the difference between students as resources to support learning, rather than as problems to be overcome.
- ➤ Acknowledging the right of students to an education in their locality.
- ➤ Improving schools for staff as well as for students.
- ➤ Emphasizing the role of schools in building community and developing values, as well as in increasing achievement.
- ➤ Fostering mutually sustaining relationships between schools and communities.
- ➤ Recognizing that inclusion in education is one aspect of inclusion in society.

Problems Related to Inclusive Education
1. **Lack of Awareness:** The biggest challenge to inclusion of children with special needs is lack of awareness school authorities and teachers. Teachers lack knowledge of disabilities and experience with disabled students.
2. **. Negative Attitude of the Teacher**: Teachers, like the general public, have negative views on both disabled students and mainstreaming. Teachers have negative attitude to mainstreaming
3. **Appropriate Environment:** Most schools do not have the environment to make children with special needs feel welcome. There is lack of resources and infrastructure.
4. **Lack of Attention to Individual Development:** The current education system does not allow for individual development of children at their own pace. Teachers are unable to cope with differences in children.
5. **Lack of Training**: Teachers cannot identify and work with children who are different not because they don't want to, but due to lack of training. This makes children with special needs vulnerable, particularly in the Indian milieu. The teachers do not know how to deal with these children.
6. **Large Classroom Size**: In a typical Indian class of fifty children, children with special needs, fall outside the teacher's tolerance level.
7. **Non-Acceptance:** Their non disabled peers do not accept these students due to their inability and slowness to participate in normal activities.

Best practices for Inclusive Education
There are some practices which should be made for the effectiveness of inclusive education system-:
- Focus on instruction for diversity.
- Differentiated and multi level instruction.
- Schools based support team
- The support teacher model.
- Commitment to self development.
- Creative and sustained problem solving.

Conclusion:
In Inclusive Education the mode of full inclusion has a great significant value. When the teacher enters into the classroom for instructional purpose, he uses all the materials, relevant method in his teaching for making his teaching interesting and effective. In this model there are strategies to help children with individualized education plan (IEP) but there are so many barriers come in achieving the goal. In this model, the general education teacher is fully responsible for the child. In the full inclusion setting, the students with special needs are always educated alongside students without special needs, as the first and desired option while maintaining appropriate supports and services. Some educators say this might be more effective for the students with special needs.

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IMPACT OF ARTIFICIAL INTELLIGENCE IN INDIAN EDUCATION SYSTEM

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Abstract

This study explores the impact of artificial intelligence (AI) on higher education in India, focusing on its integration with Indian institutions, its practical use, and the factors influencing its adoption. AI has significantly transformed society and markets, with tools like Siri, Alexa, and chatbots being used to analyze customer preferences in online buying and address queries in support systems of banks, airlines, and telecom firms. Artificial Intelligence has also influenced the education sector, with machine learning systems capable of cognitive processes like thinking, acting, facial recognition, object and picture deduction, and following instructions. Many scientists believe Artificial Intelligence represents the future of the education system, with the entire educational process relying heavily on AI-driven systems. The article aims to explain the significance, principles, prospective uses, efficacy, and obstacles of Artificial Intelligence in the Indian education system. Artificial Intelligence has both advantages and disadvantages, including potential erosion of values, endangerment of human civilization, health risks for learners and staff, decreased employment opportunities for traditional teachers, excessive reliance on technology, disparities in learning outcomes, challenges in data management, and cybersecurity issues.

Keywords: Artificial Intelliiongence, Education, Technology, Learning and Teaching

Introduction

Artificial intelligence (AI) has the potential to revolutionize education by enhancing personalization, engagement, and efficacy. It uses advanced algorithms like machine learning and natural language processing to analyze data, detect patterns, and generate precise forecasts, allowing instructors to customize learning experiences to meet individual student needs. Intelligent tutoring systems, chatbots, and automated grading can improve efficiency, alleviate instructor workload, and deliver more precise feedback. However, Artificial Intelligence implementation faces challenges such as privacy concerns, security risks, trust issues, cost management, and potential biases. Ethical considerations are crucial for the successful implementation of Artificial Intelligence based education systems. Chatbots offer tailored assistance, streamline administrative duties, and generate new avenues for interaction. Virtual tutors provide rapid feedback and help students navigate their educational progress. Accessibility is essential for all students, including those with disabilities. Artificial Intelligence systems must prioritize transparency and equitable treatment for all students, regardless of ethnicity or gender. The potential for Artificial Intelligence in education is exciting, offering opportunities for innovation and growth. It can develop personalized learning paths, enhance teacher-learner interactions, and improve communication and involvement among educators, students, and peers. The research highlights the impact of AI on instructional methods, assessment, and administrative procedures, suggesting new opportunities in the future.

The Ministry of Electronics & Information Technology (MEITY) has launched the "India AI" program to promote national-level projects and stimulate the growth of India's Artificial Intelligence innovation ecosystem. The MEITY has petitioned the Ministry of Skills Development & Entrepreneurship (MSDE) to develop a strategy for enhancing AI skill development in India. AI has the potential to cause job disruptions but also create new opportunities and lead to work evolution. Emphasis should be placed on ongoing education, acquiring new skills, and fully embracing the

capabilities of AI and generative AI to enhance and streamline processes. The AI revolution is projected to surpass the IT revolution in India, and the educational environment must be prepared and equipped to support this. The objective of India AI is to establish India as a dominant force in the global field of artificial intelligence. This includes fostering and stimulating AI innovation and start-up ecosystems, harnessing AI capabilities to drive significant societal change, and developing a framework for Responsible & Ethical Artificial Intelligence applicable to both India and the global community.

Research shows a direct link between AI integration and improved academic achievement, particularly in rural India where access to education is scarce. AI can help bridge geographical disparities by integrating AI with immersive technologies like augmented reality and virtual reality, enabling students to receive top-tier education regardless of their location or school affiliation. This also allows students to engage in immersive vocational training, acquiring practical skills for their future careers. The deliberate integration of technology in classrooms also empowers teachers, allowing them to manage administrative tasks and automate repetitive paperwork, allowing them to focus on fostering connections with their students. This transforms educational institutions into nurturing learning environments. AI solutions can assist teachers in creating question papers, classroom assignments, and capstone projects, while chatbots as mentors and digital assistants can add enjoyment to the educational setting. The future depends on achieving a delicate balance between AI for personalized learning, teacher assistance, and eliminating educational inequalities, ensuring every child has access and opportunities to flourish.

Regulatory authorities like NCVET, AICTE, and UGC can facilitate the development of AI skills by creating clear criteria and standards for AI education, promoting the integration of AI courses in institutions, establishing faculty training programs, and providing assistance for infrastructure and resources. Partnerships between academic institutions and industries can facilitate internships, cooperative research initiatives, and the development of relevant curriculum. The National Credit Framework (NCrF) is essential for establishing standardized training in AI across educational institutions, ensuring uniform instruction standards for students.

Impact of Artificial Intelligence

Artificial Intelligence (AI) has become a significant tool in various sectors, including astronomy, healthcare, electronic commerce, education, and search approaches. In astronomy, AI helps understand the universe's workings and origins, while in healthcare, AI aids physicians in making accurate diagnoses and providing early warnings when patients' conditions deteriorate. In e-commerce, AI assists buyers in finding related products with suggested size, color, or brand options. In education, AI automates the grading process, allowing tutors to allocate more time for teaching. AI chatbots can interact with students as teaching assistants, and in the future, AI may function as personal virtual tutors for students.

Artificial Intelligence (AI) has revolutionized education by offering personalised learning, efficient teaching methods, and innovative teaching approaches. This approach caters to individual learning styles and speeds, enhancing the effectiveness and interactivity of the learning environment. AI also automates mundane tasks, such as grading systems, administrative processes, and data analysis, resulting in time savings for educators. This allows them to focus on personalized education and student assistance, resulting in more focused and prompt feedback. AI-driven teaching approaches, such as virtual simulations, adaptive learning platforms, and intelligent tutoring systems, improve student involvement, promote analytical thinking, and create a flexible and responsive learning environment.

However, the integration of AI in education presents both promising prospects and challenges. Its capacity to individualize learning, improve accessibility, and stimulate innovation requires careful development and ethical deliberation. By acknowledging and resolving issues related to data privacy, algorithmic bias, and the human factor in education, we can harness the potential of AI to create a future where technology enables educators and cultivates a more immersive, efficient, and fair learning experience for everyone.

Academic integrity is a moral standard of human conduct that upholds educational ideals by promoting behaviors such as refraining from cheating, plagiarism, and contract cheating. It is commonly observed in most educational institutions and is taught in ethics courses and referenced in the curriculum. Academic integrity comprises principles and actions, including truthfulness, reliability, impartiality, and regard for intellectual ownership. However, AI also poses significant obstacles to maintaining academic integrity, as it allows for easy access to and manipulation of extensive volumes of information. AI-generated content may be erroneous or deceptive, potentially weakening or compromising the educational process. To maintain the accuracy and reliability of academic data, it is crucial to safeguard it against AI-driven cyber threats such as unauthorised access and data breaches. Enhancing tools' capacity to evaluate the reliability and trustworthiness of sources could lead to the proliferation of misinformation and subpar academic output.

The Institute must establish a comprehensive policy on research procedures that clearly defines acceptable conduct and unethical behavior. This policy serves as a crucial protocol for upholding the Institute's standing and scholarly honesty. Encouraging academic integrity through workshops, seminars, and conferences is essential to ensure the authenticity and credibility of research. AI technology can be used to identify instances of plagiarism, optimizing the review process and guaranteeing the authenticity of the study. The integration of artificial intelligence (AI) into education has radically altered the landscape, presenting both advantages and potential drawbacks. To effectively address academic integrity in the age of AI, it is essential to explore the challenges and provide comprehensive solutions. Obstacles to maintaining academic honesty include plagiarism automation, deep fake technology, algorithmic bias, ethical dilemmas, and educational empowerment.

Plagiarism automation involves students copying information from online sources without properly acknowledging the original authors, while deep fake technology poses a significant challenge to the trustworthiness of scholarly literature. Algorithmic bias refers to the tendency of AI algorithms to propagate prejudices, undermining justice and equity. Automated grading systems may exhibit bias towards certain writing styles or unfairly penalize those who are not native English speakers, leading to unequal evaluation results. Ethical dilemmas arise from the use of AI in academic research, such as safeguarding data, obtaining consent, and promoting transparency. Researchers need to confront difficulties such as the transparency of algorithms, data ownership, and the potential for exploitation of insights gained by Artificial Intelligence.

Strategies to guarantee academic honesty include educational empowerment, technological surveillance, policy frameworks, and fostering community involvement. AI technology has revolutionized conventional educational approaches by offering personalized learning experiences, automating administrative tasks, and optimizing research processes. Students can efficiently retrieve extensive amounts of information, interact with peers from a distance, and receive customized feedback on their assignments. To uphold academic integrity and assure the legitimacy and trustworthiness of academic pursuits in the digital age, interdisciplinary collaboration, empowering education, maintaining

technological vigilance, and fostering the development of ethical Artificial Intelligence are necessary. With the rapid advancement of technology, various sectors of our lives, including academia, are faced with both opportunities and challenges.

Academic integrity is crucial in the era of Artificial Intelligence, as it directly influences the credibility and dependability of scientific progress. Students must adhere to ethical guidelines when obtaining, analyzing, and presenting data, and avoid plagiarism to maintain the authenticity of pharmaceutical research. Teachers must design curriculums and evaluate student performance carefully, prioritizing the ethical use of AI tools and creating an environment where students understand the difference between technological advancement and academic dishonesty. Pharmaceutical management faces the challenge of maintaining academic integrity while keeping costs low. To ensure the integrity of the entire research process, strong monitoring and control systems are essential. AI solutions should be implemented to enhance the identification of academic misconduct and preserve the integrity of the research process.

Artificial Intelligence offers several benefits for academic integrity, including adaptive learning, improved accessibility, plagiarism detection, data verification, and consistent, impartial, and expedited evaluation. Adaptive learning helps students develop a deeper understanding of ethical research techniques, while Artificial Intelligence can also improve accessibility by automatically generating transcripts, translations, or summaries. Plagiarism detection ensures the uniqueness and genuineness of research efforts. Data verification aids in comparing extensive datasets, improving the precision of information presented in academic publications and preventing the spread of erroneous or deceptive data, Academic integrity is essential in the era of AI, as it directly impacts the credibility and dependability of scientific progress. Teachers, researchers, and pharmaceutical management must work together to ensure the integrity of Artificial Intelligence in pharmaceutical education. The educational process is a crucial national and global activity that facilitates access to modernization through formal, informal, and nonformal means. Active engagement and communication between students, teachers, and educational resources are essential for achieving this objective. In Pakistan, English is mandatory for students from kindergarten to graduation due to its role in understanding foreign academic endeavors, being globally recognized in research, business, aviation, diplomacy, and as a catalyst for scientific and technological progress.

Language serves as the main means of communication for expressing culture, values, beliefs, and customs. It inherently stimulates the daily existence of any race, belief system, transportation information, and global condition. Language plays a crucial role in society by fostering a sense of group identification and unity, transmitting and safeguarding cultural traditions, values, and realities. Learning languages as a second language allows one to appreciate the complexity of knowledge acquired by a child when learning their native language. Language and communication are inherently interconnected, and if language is eliminated, communication will no longer exist. English has become an essential tool for obtaining and using a diverse array of pertinent information in the era of information and globalization. ICT and digital devices have been used across other educational disciplines, facilitating the creation of a technology-enhanced language learning (TELL) model within the language learning domain. Computer-Assisted Language Learning (CALL) and Mobile-Assisted Language Learning (MALL) have gained significant support in recent times, highlighting the potential and efficacy of language instruction and acquisition using diverse digital devices.

Conclusion

Artificial Intelligence (AI) is revolutionizing the Indian education sector by providing personalized learning experiences, data-driven insights, and enhancing student engagement and motivation. AI-driven platforms and intelligent tutoring systems dynamically adjust to individual needs, enhancing student engagement and motivation. Educators can use learning analytics and predictive modeling to provide data-driven insights, allowing them to customize teaching methods and respond to specific student needs. Artificial Intelligence can also help in broader student development by enhancing social and emotional learning, fostering creativity, and promoting critical thinking. Edtech startups like Byju's and Vedantu use Artificial Intelligence to provide tailored learning experiences, adaptive evaluations, and remote education solutions. AI-driven chatbots also assist students in addressing inquiries and receiving coaching. However, ethical considerations are crucial, as AI must be used responsibly to prevent worsening existing education disparities. In summary, AI is a catalyst for enhancing online education and optimizing the teaching-learning process in India.

Artificial Intelligence (AI) has significantly transformed various aspects of life, including education. It has improved cognitive functions like thinking, perception, learning, problem-solving, and decision-making. Artificial Intelligence has advanced in data collection and processing, enabling intelligent systems to perform various tasks, improve communication, and boost productivity. Artificial Intelligence is driving the Fourth Industrial Revolution and is expected to significantly impact households, enterprises, and government procedures. However, it can also present challenges like unethical algorithms and job displacement. Artificial Intelligence has the potential to revolutionize education by offering customized, adaptable, and efficient learning opportunities. It can identify student strengths and weaknesses, adjust the pace and content of education, and streamline administrative tasks. Artificial Intelligence can analyze large amounts of educational data to identify patterns, predict future outcomes, and provide informed decision-making perspectives. The future impact of Artificial Intelligence in education will significantly impact various aspects of life, including education. Educators in many countries often face underappreciation and excessive administrative burdens. Artificial Intelligence can help by offering tailored curricula that align with individual interests and skill evaluations.

Artificial Intelligence has the potential to revolutionize education by providing personalized, flexible, and efficient learning experiences. It can evaluate individual students' strengths and limitations, adjust instruction speed and material, optimize administrative tasks like registration, scheduling, and grading, and analyze vast amounts of educational data to detect trends and make predictions about future outcomes. This allows for useful insights that guide decision-making. online platforms offer lifelong learning opportunities, while educators benefit from personalized professional development and captivating classes. Predictive analytics help identify students at risk and optimize resource allocation. AI also enhances security by integrating online proctoring, enabling virtual classrooms for distant learners, and improving research capabilities.

Artificial Intelligence also promotes inclusivity by offering specialized assistance to students with disabilities and overcoming language barriers through translation tools. AI-driven online platforms provide lifelong learning opportunities, while educators gain from personalized professional development and the development of engaging classes. Artificial Intelligence also improves security by integrating online proctoring, enabling virtual classrooms for distant learners, and boosting research capabilities. It can decrease costs related to education, foster the development of influential educational resources, increase engagement through game-like elements, extend global education, provide instant

access to information, and assist in career decision-making. In conclusion, Artificial Intelligence has the potential to transform the educational system, ensuring equitable, prosperous, and readily available learning experiences. By leveraging Artificial Intelligence's capabilities, it can significantly improve the quality of education and contribute to a more inclusive and effective learning environment.

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THE ATTITUDES OF TEACHER EDUCATORS OF COLLEGES OF EDUCATION TOWARDS INFORMATION AND COMMUNICATION TECHNOLOGIES

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Abstract

This study investigates the attitudes of teacher educators of Teacher Education Colleges towards ICT and the significant difference between their attitudes and certain variables such as age, gender, type of college, management of college and experience. ICT attitude scales were administered to 100teacher educators of Teacher education colleges of Karnataka and the data collected were analyzed statistically. It was found that the teacher educators of Teacher Education Colleges have positive attitudes toward information and communication technologies, and there are significant correlations between their attitudes and certain variables such as gender, Locale of College and Designation.

Keywords: *Attitudes, Teacher Education, Teacher Educator, Information Communication Technologies*

Introduction

Information and Communication Technology is the technology required for the processing of data and other information. It is the combination of telecommunication and computer science for the capture, storage, and transmission of information to any nook and corner of the world. Basically ICT has to parts –computer technology and communication technology. Computer technology provides the basis for processing of data to convert it into useful information. Communication technology also called telecommunication technology; consist of electronic devices and systems for communication over long distance. The teachers are now free to use various facilities of the computer and communication advantages both in classroom and at their homework. The increased powerful and lesser cost computers and other information devices are made classrooms for most effective transactions. The teaching aids such us LCD projector and other audio visual devices make classrooms wonderful. The students can interact with experts and professors of other institutions with the help of interactive instructional initiatives. A number of learning tools simulations and instructional software are available in the web teachers can now able to expose students to outside places Computer technology has made the dream of distance learning a reality.

Education is no longer limited to classrooms. Even if students and teachers are not in the same premises, they can very well communicate with others. There are many online educational courses whereby students are not required to attend classes or be Teacher present for lecture. They can learn from the comfort of their homes and adjust timings as per their convenience. For example courses like yoga was previously taught by an instructor in a small room with limited learners but now the technology is advanced so that vast numbers of learners can use internet for learning different Yogasana.

This study investigates the attitudes of teacher educators of Teacher Education Colleges towards ICT and the relationship between their attitudes and certain variables such as gender, Locale and Designation.

Benefits of ICT in Teacher education

1. It helps to create full-fledged students who are able to concentrate better on both practical and theoretical work.

2. It helps students to develop a better understanding of their own body parts and that of the human body in general.

3. Throughout ICT tools, pupils can benefit from immediate feedback to improve their observational and analysis skills.

4. General improvement in the performance level of the majority of the pupils' work, as they struggle their way to look impressive especially if their performance will be analysed on digital video system.

5. It can be used to model or demonstrate what you are teaching. Therefore it acts as a great teaching tool for learning new skills and enabling your students to reach the "mastery phase" of skill development.

6. Using technology e.g.: video recording, allows for immediate feedback about student performance. This gives children positive reinforcement as they are engaging in a task and improves motivation.

Objectives of the study

1. To study the Attitude of Teacher educators of TECs towards Information and communication technologies in relation their gender.

2. To study the Attitude of Teacher educators of TECs towards Information and communication technologies in relation their Subject.

3. To study the Attitude of Teacher educators of TECs towards Information and communication technologies in relation their Designation.

Hypotheses of the Study

The following hypotheses were formed for the present study:

1. There is no significant difference of Attitude between the mean scores of male & female Teacher educators of TECs towards Information and communication technologies.

2. There is no significant difference of Attitude between the mean scores of Science & arts Teacher educators of TECs towards Information and communication technologies.

3. There is no significant difference of Attitude between the mean scores of Assistant Professor and Associate Professor/Professor of TECs towards Information and communication technologies.

Operational Definitions of terms used:

ICT: This term refers to the various aspects of computes, networks (including the Internet), software and other environments that act as a tool for teachers and students by supporting learning and instruction. ICT implementation in education is a complex and multifaceted process and, till now, many difficulties encountered to integrate ICT in the school/College practices.

TEACHER EDUCATORS OF TECS: They are teacher working in TECs of Karnataka they may Public are Private in nature. Professors, Assistant Professors and Associate professor were considered for this study

Scope of the study

The subjects for the research are Lecturers working in TECs of Karnataka. The results of the study may show the effect of sex, Locale, designation, on Attitude towards Information and communication technologies. The results of the study may be the sources or information which leads to know the Attitudes of Teacher educators of TECs towards using Information and communication technologies in an educational setup. This study hopes to support educational institutions in implementing and improvement of Information and communication technologies courses by identifying specific skills,

confidence and perceived of usefulness of Information and communication technologies for the current and future work which will increase the high level of work effectiveness and organizational productivity. It is hoped that the outcome of this study will go a long way in providing empirical information to enhance further development of workplace at this digital era.

Research Design and Methodology

The research method, variables, sample as well as tools for data collection form part of Research Methodology. They are presented below.

Research Method:

In this present study is a descriptive research where researcher used Survey method to know the Attitude of Teacher educators of TECs towards Information and communication technologies.

Sample of the study

The population identified for the current study is Lecturers who are presently teaching in TECs of Karnataka. 100 Teacher educators of TECs are considered as Sample of the study. The purposive sampling technique was used to attain the objectives of the study.

Tools used for the Study

Investigator himself prepared tool "Attitude of Teacher educators of TECstowards ICT" to collect attitudes of Teacher educators of TECs towards ICT. The tool was prepared after though verification from experts.

Statistical Techniques for Data Analysis:

The significant differences and relationship of Attitude towards ICT were analyzed by independent samples 't' test and 'r' test.

Objective wise Analysis of the data:

The significant differences and relationship of Attitude towards ICT were analyzed by independent samples t test and r-test. The findings of the present study are presented in the following tables:

Objective-1: To study the Attitude of Teacher educators of TECs towards Information and communication technologies in relation their gender

Table: 1: Mean, S.D. and t-value of mean scores of Male & Female Teacher educators of TECs towards Information and communication technologies

Gender	N	Mean	SD	t-value
Male	75	1684.13	10.253	8.432
Female	75	188.25	12.56	

From the table-1, it is evident that the calculated t-value is 8.432 which is more than the table value 2.63 at 0.01 level of significance with the df = 99 and therefore it is significant and the first null hypothesis is rejected and the statement there is significant difference between the mean scores of male and female Teacher educators of TECs towards Information and communication technologies is accepted. Female Teacher educators of TECs have more positive Attitude than that of male Teacher educators of TECs

Objective-2: To study the Attitude of Teacher educators of TECs towards Information and communication technologies in relation Locale of their college.

Table-2: Mean, S.D. and t-value of mean scores of Science & arts Teacher educators of TECs towards Information and communication technologies

Variable	N	Mean	SD	t-value
Urban	75	205.18	12.25	8.46
Rural	75	198.28	11.69	

From the table 2 it is evident that the calculated 't' value is 8.46 which is more than the table value 2.63 at 0.01 level of significance with the df = 99 and therefore it is significant and the Second

null hypothesis is rejected and the statement there is significant difference between the mean scores of Urban and rural college Teacher educators towards Information and communication technologies is accepted. Urban college Teacher educators of TECs have more positive Attitude than that of Rural college Teacher educators of TECs

Objective-3: To study the Attitude of Teacher educators of TECs towards Information and communication technologies in relation their Designation

Table: 3: Mean, S.D. and t-value of mean scores of Assistant Professor and Associate Professor/Professor of TECs towards Information and communication technologies

Variable	N	Mean	SD	t-value
Assistant Professor	100	214.23	10.251	9.24
Associate Professor/Professor	50	185.23	09.285	

From the table 3 it is evident that the calculated t' value is 9.24 which is more than the table value 2.63 at 0.01 level of significance with the df = 99 and therefore it is significant and the third null hypothesis rejected and the statement there is significant difference between the mean scores of Assistant Professor and Associate Professor/Professor of TECs towards Information and communication technologies is accepted. Associate Professor/Professor of TECshas more positive Attitude than that of Assistant Professor of TECs.

Findings of the Study

1. There is a significant difference of Attitude between the mean scores of male and female Teacher educators of TECs towards Information and communication technologies.
2. There is a significant difference of Attitude between the mean scores of Science and arts Teacher educators of TECs towards Information and communication technologies.
3. There is a significant difference of Attitude between the mean scores of Assistant Professor and Associate Professor/Professor of TECs towards Information and communication technologies

Conclusion

In conclusion, it can be said that the use of ICTs fosters learners' independence and impressions, which improves the quality of the teaching-learning process and promotes ongoing self-improvement. In order for teachers to use information and communication technologies more effectively, administrators and educators should foster a favourable attitude towards these tools and ensure that educational institutions have the required technical equipment on hand.

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AN QUANTITATIVE ANALYSIS OF EDUCATIONAL DEVELOPMENTS AND ECONOMIC GROWTH OF INDIAN ECONOMY

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Abstract

"There is no better investment a nation can make than education. It is an investment in economic development, an investment in opportunity and an investment in our shared future." - Evelin Weber

Under the context of Globalisation, education is playing vital role in the development of an economy and economic development lies on the growth of GNP/GDP. Modern education requires adequate and effective investment of Educational resources. The main objective of this study is to indicate the contribution of modern education evolving levels of economic progress in globalised Economy, i.e. Indian Economy. This is not only the attempt to measure the contribution of education to growth but also examines educational structure corresponding to modern world. Gross National Product, as an annual rate of growth and per capita is used as the best measure of economic progress. Budget allocation, Educational Expenditure, School enrollment, Student-teacher ratio parameters are used to measure the growth of education in India. The study covers the comparison of trends in the distribution of expenditure by level of governments and by levels of school. The study suggests to overview the public expenditure on modern education.

Keywords: Economic Growth, Gross National Product. Public Expenditure. Investment, Modern Education.

Introduction:

Expanding education and health facilities are the most important ways to improve the quality of human wealth. Human resource development plays an important role in economic development and growth. As it is said that 'Education is power', education plays an important role in enhancing the skills and abilities of human beings. Any country that has made educational progress can easily move forward. Many of the backward countries we see in the world today are backward in education. Renowned education expert Dr H. Narasimhaiah used to say "Education is as important as National Defence" Education is the basic tool of consciousness development, social reorganization and economic development. Education is the most important infrastructure of the economy. There are many reform policies are implemented by Government of India since independence and we achieved some progress in providing quality education which directly and indirectly accelerating economic growth. To upgrade literacy rate, school education and higher education system in contemporary world many strategic policies are introduced such as National Policy on Education 1986, National Education Policy 2020, increased share in Government Budgets and through many other recommendations of educationists etc. The study report analyse the impact, performance as well as future perspectives of Indian Education system in attaining Economic Development.

Objectives of the study:

1. To overview the growth of education in India.
2. To measure the contribution of education towards economic development.
3. To understand the role of government to uplift education system at world stage.
4. To explain 'education is the key of all development'.

Methodology:

The present study is based on secondary data. To examine the Quantitative aspects affecting to economic growth of Indian Economy, the study uses several reports and data's published by MHRD, Department of Education and Various Study Reports.

Progress of Education in India:

In India, the importance of education was realized during the country's freedom movement. But the British during colonial rule did not give much importance to education. But they offered to educate only as much as was necessary to create the officials needed to run their day-to-day administration smoothly. Because of this, the literacy rate of the country was only 15% at the time of the country's independence.

After independence, the government tried to give special attention to the development of education. Due to this, in the last seven and a half decades, the education sector has seen extensive expansion across the length and breadth of the country. While the image of the entire education sector has seen a radical change, the education sector of the country has kept some unique achievements in its lap. They are:

- ❖ India's education system is one of the largest in the world with 26.52 crores of students and 1.31 crore of teachers and an annual expenditure of billions of rupees.
- ❖ India has the second largest well-educated and skilled workforce of men and women in the world after China.
- ❖ Excellent educational institutions developed at all levels. The National Policy on Education (NPE) of 1986 set a target of 6 percent of the Gross National Product (GDP) for expenditure on education. But against this target, the total expenditure on education by the central and state governments in 2004-05 was only 145 per cent of GDP. Education has been given more emphasis in various Five Year Plans. First Five Year Plan for education sector Rs. 133 crore (6.8 percent) was mixed. In later projects like Ninth and Tenth Five Year Plans respectively Rs. 24,908 crore and Rs. 43,825 crores were allocated to the education sector.
- ❖ Programs like Mid-day Meal Scheme, Sarva Shiksha Abhiyan, etc. have been implemented. Recently, free education for children up to the age of 14 has been declared as a fundamental right (86th Amendment of the Constitution). There are 10.80 crore beneficiary children under Mid Day Meal Scheme. National Secondary Education Abhiyan (RMSA) along with Sarva Shiksha Abhiyan (SSA) for the development of different levels of education. Schemes like Model School Scheme (MSS), Sakshar Bharat (SB), Adult Education, Rashtriya Uchatar Shiksha Abhiyan (RUSA), Technical Education Quality Improvement Program (TEQP) have been implemented.
- ❖ The National Education Policy of India 2020 (NEP 2020), which was started by the Union Cabinet of India on 29 July 2020, outlines the vision of new education system of India. It will prepare our youth to meet the diverse national and global challenges of the present and the future.

Planned Expenditure on Education :

I. During Five Year Plans

The government has implemented several measures to achieve the above objectives. In various five-year plans, the government earmarked a certain amount of money for education. The details are as follows.

Table no. 1 : Expenditure on Education during five year plans

Plan Periods	Expenditure on Education(in crore Rupees)	% Share
First Five Year Plan	133	6.8%
Second Five Year Plan	208	4.5%
Third Five Year Plan	418	4.9%
Fourth Five Year Plan	823	5.2%
Fifth Five Year Plan	1,285	3.3%
Sixth Five Year Plan	2,977	2.6%
Seventh Five Year Plan	7,686	3.5%
Eighth Five Year Plan	19,600	4.5%
Ninth Five Year Plan	24,908	7%
Tenth Five Year Plan	43,825	15%
Eleventh Five Year Plan	2,74,228	19.29%
Twelfth Five Year Plan	3,23,841.98	12.41%

Source: MHRD, retrieved from www.education.gov.in

The table no. 1 shows government planned and non planned expenditure on education during first to twelfth five year plans. It shows increase in total public expenditure of Rs. 133 crores in 1950-51 at first five year plan to Rs. 3,23,841.98 crores in 2012-17 at twelfth five year plan.

II. Education under NITI Aayog :

The National Institution for Transforming India (NITI Aayog) focuses on education in a number of ways, including:

Education Vertical: The Education Vertical aims to make education more accessible, affordable, equitable, accountable, and high quality. It focuses on areas such as pre-primary, secondary, higher, technical, and teacher education, as well as formal and non-formal education.

School Education Quality Index (SEQI): This index evaluates the performance of states and union territories in the school education sector. It helps states and union territories identify their strengths and weaknesses, and share best practices.

Project SATH-Education: The Sustainable Action for Transforming Human capital - Education (Project SATH-E) initiated by the NITI Aayog in 2017 aims at making a wide transformation with a focus on improving quality education. This project demonstrates how to improve the quality of education. It includes initiatives such as academic monitoring, rewards and recognition programs, assessment reforms, and teacher training. During the COVID-19 pandemic, the project adapted to provide support digitally.

Reports: NITI Aayog has released reports on education, That includes: 1) Addressing the issue of sub-scale, inadequately resourced schools head-on with strong political support. 2) Solving large-scale teacher vacancies issues. 3) Improving teacher quality and pedagogy. 4) Enforcing accountability towards learning outcomes. 5)Focus on Early Childhood Education (ECE) and contextualised Mother tongue-based Multilingual Education (MLE). 6) Strengthening the governance structures in education departments.

II. National Education Policy NEP 2020 :

Education is fundamental for achieving full human potential, developing an equitable and just society, and promoting national development. Providing universal access to quality education is the key to India's continued ascent, and leadership on the global stage in terms of economic growth, social justice and equality, scientific advancement, national integration, and cultural preservation. Universal

high-quality education is the best way forward for developing and maximizing our country's rich talents and resources for the good of the individual, the society, the country, and the world. India will have the highest population of young people in the world over the next decade, and our ability to provide high-quality educational opportunities to them will determine the future of our country. The global education development agenda reflected in the Goal 4 (SDG4) of the 2030 Agenda for Sustainable Development, adopted by India in 2015 - seeks to "ensure inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030. Such a lofty goal will require the entire education system to be reconfigured to support and foster learning, so that all of the critical targets and goals (SDGs) of the 2030 Agenda for Sustainable Development can be achieved.

Achievements of NEP 2020:

➢ As far as Ministry of Education is concerned, there has been increase in budget allocation from Rs. 99,311.52 crore (2020-21) to Rs. 1,12,899.47 crore (2023-24), which is around 13.68 % increase. As per Analysis of Budgeted Expenditure on Education 2018-19 to 2020-21, total expenditure on education as percentage of GDP has shown increasing trend and for the year 2020-21 it is 4.64%.

➢ Global Initiative for Academic Network (GIAN) has also been implemented which seeks to tap the talent pool of scientists and entrepreneurs from abroad, including those of Indian origin, to augment the country's existing academic resources. The Scheme for Promotion of Academic and Research Collaboration (SPARC), aims at improving the research ecosystem of India's higher educational institutions by facilitating academic and research collaborations between top ranked Indian Institutions and globally ranked foreign institutions, through joint research projects involving mobility of students and faculty.

➢ The Memorandum of Understanding (MoU) for setting up of campus of IIT Madras in Zanzibar- Tanzania has been signed between the Ministry of Education (MoE), Govt. of India, IIT Madras and Ministry of Education and Vocational Training (MoEVT) Zanzibar- Tanzania, first ever IIT campus to be set up outside India. Similarly, a Memorandum of Understanding (MoU) has been signed between the Ministry of Education and Abu Dhabi Department of Education and Knowledge (ADEK), and the Indian Institute of Technology Delhi (IIT Delhi) to establish 1st campus of IIT Delhi in Abu Dhabi.

➢ As announced by Hon'ble Finance Minister in the Budget Proposal 2022-23, world-class foreign universities and institutions have been permitted in the GIFT City, Gujarat (Gujarat International Finance Tec-City) to offer courses in Financial Management, FinTech, Science, Technology, Engineering and Mathematics free from domestic regulations, except those by International Financial Services Centers Authority (IFSCA) to facilitate availability of high-end human resources for financial services and technology.

➢ PM SHRI for upgradation of schools, Under PM SHRI, Rs. 630 Crore were released as first installment to selected 6207 schools, out of more than 14500 PM SHRI Schools; with total cost of Rs. 27360 crore spread over a period of 5 years with central share of Rs. 18128 crore.

➢ PM e-VIDYA to unify all efforts related to digital/online/on-air education.

➢ DIKSHA (Digital Infrastructure for Knowledge Sharing) as One Nation One Digital Platform having e-Books and e-Contents.

➢ Launch of National Curriculum Framework for Foundational Stage (NCF FS) and Jadui Pitara for play-based learning teaching material tailored for children between the age group of 3 to 8 years.

➢ NISHTHA (National Initiative for School Heads' and Teachers' Holistic Advancement) 1.0, 2.0 and 3.0 Integrated Teacher Training Programme for different stages of school education for Teachers, Head Teachers/Principals and other stakeholders in Educational Management.

➢ National Digital Education Architecture (NDEAR) for creating a unifying national digital infrastructure to energise and catalyze the education ecosystem.

➢ National Credit Framework (NCrF) and National Higher Education Qualification Framework (NHEQF);

➢ Academic Bank of Credit to facilitate Transfer of Credits.

➢ Multiple Entry and Exit in Academic Programme offered by Higher Education Institution. And Transforming Higher Education Institutions into multi-disciplinary Institutions. Pursuing two Academic Programme simultaneously.

➢ Revised regulation of ODL / Online Education permitting upto 40% credits of courses using SWAYAM platform.

➢ Regulations on Minimum Standards and procedures for award of Ph.D. degree.

➢ Guidelines for Training/Orientation of Faculty on Indian Knowledge System (IKS).

Public Financing of Education in India :

With the enactment of 'right to education' (RTE) Act in 2009, India has legalised the basic minimum needs approach to include schooling of elementary and secondary levels. Universalisation of elementary education has approached 100 per cent in terms of enrolment at the primary level (96.7 per cent in 2014). The 'annual status of education report' (ASER, 2014) observes that the RTE Act and the Sarva Shiksha Abhiyan (SSA) have together resulted in an improvement in infrastructure in government schools. However, it registers serious concern over the standard or quality of education particularly in government schools where most children in higher classes could not perform learning abilities meant to have been picked up in the lower classes. Such a devastating situation in the status of public schools is contributing to shifting a large section of the students into private schools.

The trend in educational expenditure in India, over the period 1951-2021 shows growth of education in relation to the macro economic indicators like population, gross national income and share of finance in education.

Table No. 2 : Educational Expenditure in India
In Relation to Macro Economic Indicators (1950 to 2021)

Year	Population (in crores)	National Income (in current prices) (Rs. in crore)	Total Public Expenditure (Rs. in crore)	Educational Expenditure (Rs. in crore)	% Share in Total Public Expenditure
1951-52	36.11	9,531	814.14	64.46	7.92
1980-81	68.33	1,35,470	36398.39	3884.20	10.67
1990-91	84.33	5,13,966	147711.52	19,615.85	13.37
2000-01	102.70	19,02,148	572160.14	82,486	14.42
2010-11	121.02	67,56,720	11,80,749	3,72,813	33.62
2020-21	141.4	1,74,61,759	30,42,230	93,224 E	-
2024-25	145.09	2,95,35,667	48,20,512	1,25,638	-

Source: MHRD, retrieved from www.education.gov.in

The above table no. 2 explains about the growing trends in education sector, public expenditure proportionate to population and GNP shows consistent increase in government interest to development domestic education system towards global education. In 1951-52, the total size of the population was 36.11 crores and the Gross National Product at current price was Rs. 9,531 crores at this level Total Public Expenditure (including development and non development projects) was Rs. 814.14 crores where education sector accounts Rs. 64.46 crores. Later on budgetary years these indicators have consistent increase in educational share over the economic factors. This includes Expansion of institutions, to increase primary and secondary school enrollments, development of infrastructure and others.

Table no. 3 shows growth of education in relation to the economic indicators like Gross national Product, total school enrollment and total no. of teachers.

Table No. 3 : Economic Growth and Education in India

Particulars	1950-51	1990-91	2000-01	2010-11	2020-21
Gross National Product (Rs. in crore)	10,181	5,68,564	21,17,153	75,52,665	1,95,97,409
Students Enrollment in Primary and Secondary (in lakhs)	152	974	1138	1348	2380
Students Enrollment in Higher Education (in lakhs)	4.0	49	86	275	290
Total Students per Teacher (in %)	NA	NA	16	30	26
Literacy Rate (in %)	18.3	52.2	64.8	73.0	77.70

Source: MHRD, retrieved from www.education.gov.in

Present trends in Education Institutions

Table No. 4 : Expansion of Education Institutions :

Institutions	1950-51	2018-19	2021-22
Primary Schools	20,967	8,27,028	11,96,265
Secondary Schools	13,600	1,50,604	1,50,452
Higher Secondary	7416	1,30,020	1,42,398
Professional Colleges (Engineering, Medical, Arts, Science, Commerce, Education etc)	NA	39,931	43,796
Universities and Institutes of National Importance (INIs)	27	993	1262
Nursing Colleges	-	3,029	2974
Polytechnic Colleges	-	3,340	22,197
Teacher Training Institutes	-	3,759	16917
Total No. of Faculty	24,000	14,16,299	1551070

Source: MHRD, retrieved from www.education.gov.in

The above table no 04 indicates expansion of educational institutions in India. In relation to above data, the present education sector scenario is as follow:

The total number of Universities / University like institutions registered is 1,113, Colleges 43,796 and Standalone Institutions 11,296. During 2020-21, the number of Universities has increased by 70, and the number of Colleges has increased by 1,453. Since 2014-15, there has been increase of 353 Universities (46.4%). The Institutes of National Importance (INIs) have almost doubled from 75 in 2014-15 to 149 in 2020-21. Highest number of Universities is in Rajasthan (92), Uttar Pradesh (84) and

Gujarat (83). 17 Universities (of which 14 are State Public) and 4,375 Colleges are exclusively for women. States with Highest college density: Karnataka (62), Telangana (53), Kerala (50), Himachal Pradesh (50), Andhra Pradesh (49),Uttarakhand (40), Rajasthan (40), Tamilnadu (40). Top 8 Districts with Highest number of Colleges: Bangalore Urban (1058), Jaipur (671), Hyderabad (488), Pune (466), Prayagraj (374), Rangareddy (345), Bhopal (327) and Nagpur (318). Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Tamil Nadu, Madhya Pradesh, Andhra Pradesh,Gujarat are top 8 States in terms of number of colleges.43% universities and 61.4% colleges are located in Rural Areas. The total number of faculty/teachers are 15,51,070 of which about 57.1% are males and 42.9% are females.

Conclusion

The education sector in India is affected with various serious problems. There are problems in the education sector from primary level to higher level. The major issues are as follows.

1. Low quality,
2. Lack of infrastructure.
3. Widespread corruption.
4. Commercialization of education.
5. Lack of manpower planning.
6. Education that does not teach the art of living.
7. Aimlessness.
8. Lack of scientific education system. Etc

There should be a radical change in the education system, an education system should be implemented that meets the requirements of the country and teaches people the art of living. General education which is not aimed at creating clerical staff should be abolished at the highest level. Vocational education system should be implemented and education should be provided in a systematic manner to meet the labor needs of various sectors in the country.

The National Education Policy (NEP) 2020 aims to transform India into a knowledge society by providing high-quality education to all. It aims to ensure universal access to quality education at all levels by promoting the use of technology, setting up more schools, and employability skills that will accelerate economic growth.

Achieving successful implementation of this policy demands a long-term vision, availability of expertise on a sustained basis, and concerted action from all concerned encompassing National, State, institutional, and individual levels. In this context, the Policy recommends strengthening and empowering the Central Advisory Board of Education (CABE) which will have a much greater mandate and not only a forum for widespread consultation and examination of issues relating to educational and cultural development. The remodeled and rejuvenated CABE shall also be responsible for developing, articulating, evaluating, and revising the vision of education in the country on a continuous basis, in close collaboration with MHRD and the corresponding apex bodies of States. It shall also create and continuously review the institutional frameworks that shall help attain this vision.

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NEW TRENDS OF PHYSICAL EDUCATION AND SPORTS

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Abstract

Physical Education and Sports forms an important part of education even when it never received the importance it deserves. Even though it is included as part of the curriculum from the early stages of education, it has never been taken seriously by the educational administrators, the academicians and the students. Physical Education is the only profession where you talk as well as perform. The concept of Physical Education in the mind of general public is big round, play and play and no work. Abraham Lincoln quoted in one of his address, "Sportsman is the best Ambassador of the Nation." Hence, the Physical Education Director, Teacher can also be the best Ambassador of Institution, University. At present compare to earlier years and now we can come across the decline of physical education in education compare to present is one needs to overcome the hurdles and battles to improve the structure and infrastructure status in around to develop the overall discipline in physical education and sports.

Keywords: Sports, Physical Education, sports, curriculum.

Introduction

Physical Education and Sports is one of the important yardsticks and also integral part of education for any country at any point of time. Thus each country should try to set out a framework of action plan for promotion and development of Physical Education and Sports Paradoxically, sports is witnessing a spectacular boom in the media spotlight all over the world including India while it is being seriously neglected within the educational system. Physical Education act as well as the provision of resources for the nation and in the construction of evaluation system in education developments and it proms the development physical education in a country. At present compare to earlier years and now we can come across the decline of physical education in education compare to present is one needs to overcome the hurdles and battles to improve the structure and infrastructure status in around to develop the overall discipline in physical education and sports.

The Physical Education and Sports preserves the vital clue that exists between Physical Education and Sports. The reciprocal guarantee highlighted the provisions of as such it is necessary to consider Physical Education and Sports as an intrinsic part of education in all schools and colleges in a country, where sports should be compulsory right from elementary school level to till college level. In fact, quality education involves the dispensing the essential requirements of life skills i.e. learning to (i) self-motivation, creativity and problem solving (ii) Use interactive tools (communication, physical and IT) (iii) To join and live within sociality divers groups. all these Board based life skills are precisely what Physical Education and Sports can develop. Therefore, it goes without saying that Physical Education and Sports must be actively promoted by International organizations, state governments, local authorities. The field of education must coordinate and streamline these efforts to defend the cause of Physical Education and Sports. This will include helping to redress the balance of Physical Education and sport in Education in its drive to improve the situation of Physical Education and Sports worldwide.

Physical Education & Sports forms an important part of educational system even when it never received the importance it deserves. Even though it is included as part of the curriculum from the early stages of education, it has never been taken seriously by the educational administrators, the

academicians and the students. Physical Education is the only profession where you talk as well as play / perform. The concept of Physical Education in the mind of general public is big round, play & play and no work. Abraham Lincoln quoted in one of his address, "Sportsman is the best Ambassador of the Nation." Hence, the Physical Education Director/Teacher can also be the best Ambassador of our Institution / University.

The problem of defining Physical Education is not only that the term is broad based and complex, including so many kinds of phenomena, but also it means different things to different people. Someone has suggested that Physical Education is whatever Physical Educators do. J P Thomas sums up that Physical Education is education through physical activities for the development of total personality of the child and its fulfillment and perfection in body, mind and spirit. Even though this definitions differ significantly with regards to emphasis on different aspects, they still have many common elements. Some of them may be noted as: Physical Education is a phase of total Education process. It is sum of total experience and their related responses. Experience grown and responses developed out of participation in big muscular activities. All-round development of individual' – physical, mental, social, moral is the real aim of Physical Education. It is the same as in General Education. In the Indian context, Physical Education is perhaps the only aspect of education which has not been given due attention. That is due, most probably to the fact that we have remained satisfied with that the British have handed over to us, with no sincere efforts on our part top repare any concrete and far-reaching programmed for Physical Education specially suited to our conditions. We have ever-stressed the academic aspects, the physical one being relatively untouched. This has resulted in an increasingly large number of Indians who are neglecting their bodies, to whom Physical Education is similar to physical training, whose physical fitness is not what it should be they are getting 'soft'. One of the main objectives of any Physical Education activity is to maintain and improve the health of the youngsters in our school and colleges. And the School has the responsibility to see that all students achieve and maintain optimum health, not only from a moral point of view, but from the standard point that educational experience will be much more meaningful if optimum health exists.

A child learns easier and better when he is in a state of good health. Even ones' values have much to do with health building and destroying activities. Unfortunately, a large number of people suffer from 'value illnesses', i.e. they know what they are supposed to do to keep well, yet they fail to do so. They know that tobacco smoking can cause death from Lung Cancer, even then they do not give up smoking. They understand how alcohol affects the driving ability, yet they drive in a state of drunkenness. They appreciate the role of regular exercise in weight control, yet they do little to alter their sedentary way of living. Education and health & medical authorities have therefore, long recognized the need for a programmed of director Physical Education activities in school curriculum. It is during the formative and rapidly growing period of elementary school-age that foundation of proper habits, attitudes and appreciations toward all physical activities, including play is lied and desirable citizenship traits acquired, so that in adulthood he will be equipped with the knowledge, sound thinking processes, physical stamina and emotional maturity to live effectively in an ever-changing and highly complex society. In that respect, teachers bear a major responsibility in answering that challenge effectively. It is said, "An idle mind is the devil's workshop".

To study Physical Education and sports is not merely to discuss performance, technique or records journalistic-ally but to look at some of the implicit assumptions held by the general population about Physical Education and Sports. Despite the significance of sports, it has been primarily a vehicle of 'escape' more than an avenue of education. A sport has been viewed as a distraction from the trials

of everyday life. Ask some friends why they are involved in sports. The response will probably have something to do with "fun" or "enjoyment".

Every College / University should have an Elective Subject of Physical Education, if not compulsory, where 60% stress should be given to theory and 40% to practical. Another viewpoint is that all the first-year students should undergo a minimum Physical Education programmed like National Physical Fitness Test, otherwise they will not be given the degree. We should have colleges of Physical Education with 4 to 5 years degree course, like Indian Institute of Physical Education and Sports Science (IIPESS). Physical Education and Sports are seen not merely as a playground but also as a laboratory in which the theories of each discipline may be tested and/or as a phenomenon whose worthiness value, and effect on people and society must be continually scrutinized.

Suggestions & Recommendation:

1) Revision & Reconstruction of Physical Education syllabus in context with need of Society. 2) Periodical Refresher course for Physical Educational personnel by an unified agency. 3) Updating and Upgrading of the subject and related area in collaboration with top Educational &Physical Education bodies. Strict implementation and follow-up of the prescribed Physical Education standard. 4) An honest and sincere appraisal system for total evaluation and feedback. 5) The academic study of Physical Education and Sports may be as stimulating and fun as experience as one's actual participation in sports. 6) Once the rule, subject matter, and 'spirit' of both games are understood, they may be equally rewarding. General Education is for the masses, so also Physical Education. 7) 'Recreation' is an important as 'reading', 'writing' and 'arithmetic', in the life of common man. Physical activities do the garb of 'Physical Education' when the focus is on the means used, Namely, big muscles, 'Recreation' when the focus is on 'life is worth living' (joyful) attitude or use are leisure time.

Conclusion

In our profession we should follow the concept of 3 'D' Discipline, Dedication & Determination. Young people are the real wealth of the nation. No programmed is successful without the participation of youth. Therefore, to enable an individual to lead happy, enjoyable and healthy life as a member of society, he should regularly engage in games and sports and different exercise programmers to ensure development of Physical Fitness and learn skills in sports and games, which have a carryover value. Society on the other hand should provide enough opportunities to its members so that they may engage themselves in activities of their own choice and thus develop or maintain the level of Physical Fitness. Unless there is improvement in the 'General Standard of Health', excellence in sports cannot improve. Physical Education and Sports activities in educational institution should aim at 'Health Related' and 'Performance Related' areas so as to ensure 'enhancement of performance in competitive sports'. Physical Education, thus consists in promoting a systematic all-round development of human body by scientific technique and thereby maintaining extraordinary Physical Fitness to achieve one's cherished goals in life. Hence any organization of Physical Education should start with developing a positive attitude and self-confidence among Physical Educators themselves and make them feel, Physical Education need not exist in the periphery of the schools / colleges, but should extend itself to the classrooms and become the focus or central point of Educational System.

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BEST PRACTICE OF ADVS FIRST GRADE COLLEGE LIBRARY SASVEHALLI: A STUDY

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Abstract

Best Practices is continuous process by adapting new technology in the library services and can be provided effectively. This study mainly focuses on various best practices adapted by ADVS First Grade College Library. Here are some traditional best practices: Information Technology (IT) based practices and general practices that academic libraries can adopt to enhance their services which are useful guide for other libraries.

Keywords: *Best Practice; ADVS First Grade College; Library*

INTRODUCTION

The rapid pace of educational innovations and the information explosion necessitate continuous review and enhancement of library and information center functions. The main goal of the library is provide right information to the right reader at the right time. It is possible by adapting the best practices in the library. In the age of information explosion, where knowledge is abundant and easily accessible through digital means, libraries have evolved from being mere repositories of books to dynamic centers of learning and innovation. Moreover, the emergence of Information and Communication Technology (ICT) has revolutionized how information is stored, accessed, and disseminated. Libraries have adapted to these changes by digitizing their collections, implementing online cataloguing systems, and offering remote access to resources through the internet. This not only expands the reach of Libraries beyond their physical confines but enables learners to access information anytime, anywhere, using various digital devices. Libraries have become hubs for technological innovation and digital literacy. They offer training programs and workshops on information Literacy, research skills, and the use of digital tools and resources. In this way, libraries play a crucial role in equipping learners with the necessary skills to navigate the complexities of the digital age and become lifelong learners.

1. ABOUT ADVS FIRST GRADE COLLEGE

ADVS (Adi Dravida Vidya Samshte® First Grade College, Sasvehalli (Dist: Davangere was established in 1991. It is one of the premier colleges established to impart and provide in the field of higher education for the deserving candidates and prove to be a milestone in the part of progress. The college is affiliated to Kuvempu University, Shivamogga and recognized by the University Grants Commission (UGC). It is re-accredited by National Assessment and Accreditation Council (NAAC) with "B" Grade (CGPA score 2.11 on a 4 point scale in 2 nd Cycle) on 16 th September 2016.The main aim of the college is determined to provide the quality education to the future. With the correct mix of technology and human touch, the college empowers the aspiring teachers to propagate education through the rungs of the society so that they serve the nation while making a satisfying he carrier for themselves. At present, the college offers three years undergraduate courses in Arts and Commerce stream under Davangere University, Davangere.

1. ABOUT ADVS FIRST GRADE COLLEGE LIBRARY
 INTRODUCTION

The college library established in the year 1993 had 435 Volumes of books to start with. The library has consistently grown and today it has 4155 volumes of books and 10 periodicals. Still more are being subscribed.

2. COLLECTIONS

Books-4155

Journals-10

General Books-875

Magazines-10

Newspapers-05

3. REVIEW OF LITERATURE

Mane, Sunitha(2018). The focus of the paper is on highlighting the various best practices implemented by Progressive Education Societies, Modern Law College in Pune. These practices encompass traditional methods as well as those leveraging Information

Technology (IT). Additionally, general practices are discussed, serving as a useful guide for other academic libraries and special libraries. The intension is to provide insights into various methods that can be adopted by libraries to improve their service delivery effectively.

More, Ramkisan A. (2017). In this paper author has discussed on best practices adopted by Laxmibai Sitaram Halbe CollegeLibrary and Library users are getting benefits of the available facility.

Kumara B. and Ravivenkat B. (2015). This paper examine the initiative taken by the Academic Libraries at Tumkur University,

Inspired by the NAAC's policy on integrating best practices. Furthermore, the library has organized various engaging activities

Such as quiz programs, recognizing the best library users, and facilitating reading circles. These initiatives serve to foster

Dialogue between students and local authors or intellectuals, particularly regarding newly released or added books in the Library's collection.

4. WHAT IS A BEST PRACTICE?

According to National Board of Accreditation and Assessment (NAAC) "Best practice may be innovative and be a philosophy, Policy, strategy, program, process or practice that solve a problem or create new opportunities and positively impact on Organizations. Institutional excellence is the aggregate of the pest practices followed in different areas of institutional activities.

The above definition said that to provide innovative services to better implementation of Library resources and services and solve their problem

NAAC has developed some of the best practices for college libraries:

☐ Computerization of library with standard software.

☐ Internet facility to different user group.

☐ Career / employment information services.

☐ Inclusion of sufficient information about the library in the college prospectus.

☐ Compiling student/ teacher statistics.

☐ Suggestion Box.

☐ Displaying New arrivals.

☐ Displaying newspapers clippings and a clipping file maintained periodically.

☐ Information literacy programs.

☐ Conduct book exhibition on different occasions.

☐ Conduct user survey periodically.

☐ Organizing book talks.

 Organizing competitions annually.
 Instituting Annual Best Use Award for students.

5. BEST PRACTICES AT ADVS FIRST GRADE COLLEGE LIBRARY
ADVS First Grade College Library plays a vital role in development of institution. The main aim of the library is provide right Information to the right user at the right time. This library has initiated so many innovative services to its users. The library is spending lakhs rupees to build print and electronic collection for every year. ADVS First Grade College Library are mainly Classified in to four types of Best practices, these are
BEST PRACTICES
1. Traditional best practices
2. ICT based best practices
3. Library Extension best practices
4. General best practices.
5. Book Exhibition
ADVS First Grade College Library organize book exhibition once in a year with the help of registered books vendors and Publishers. This helps the users to know the latest books available in their subject and select the needed books to their department.

1.1.2 New Arrivals
New arrivals of books are display rack to create awareness of the students about the new reading materials.

1.1.3 Extended Library Hours.
The library functions between 10.00 AM to 5.30 PM on all working days. Those who can't visit the library during the class time can make use of the Library in the evening hours.

1.1.4 Orientation Programme
Library has been conducting orientation program to the new students admitted every academic year. Library has drawn up formal orientation classes in the library. Students attend the program according to the time-table drawn by the library. Students are explained about the resources, facilities, available services in the library. They are taken round the library apart from training them in searching the library databases, e-journals, e-mail and Internet/Intranet browsing etc.

1.1.5 Library Brochure
It is one of the important sources for creating exactitude about the library environment, services and collection of the library. Students can be provided the information brochure at the time of Admission which is included in college brochure and also Available on College website (http://www.advs.org/library-at-glance.html). The information brochure include information About the library facilities, like Xerox, internet etc. latest publications, latest editions to the library, CD/DVD list, book bank Facilities, library rules and regulations, electronic resources and online.

1.1.6 Library Manual
The library manual is a source of information which list out all the facilities and services of various sections and their function, Procedures and policies within the library.

1.1.7 Training Programme to Use Library Resources
Training programmes are conducted for students and teachers every year for two to three days as per their need. In this programme students are trained to find out library books by using Library OPAC, e-ShodhSindhu Database, access of Online journals and books , use of library consortiums, free online

journals, link to various useful websites etc. training should be given by expertise staffs for use of library resources, services more effectively and efficiently.

2.2.1 ICT Based Best Practice

Library Automation ADVS First Grade College Library is fully automated and using KOHA Open Source Software developed by Katipo Communication: New Zealand supported by OSS Labs has been procured for automating in- house activities and services of the library. The college library as a means to acquire, store, transmit, retrieve and process information for its students and staff. The library holds the details of more than 4000 books and serves the teaching, non-teaching staff and students.

2.2.2 Library Website

The library website have user friendly, regular updates and maintenance of library websites are essential to provide accurate information to user, apart from giving detailed information about library resources including books, journals, databases and technical reports (both print and electronic version), has made available search tools for its library users, staff details, contact persons, etc.

2.2.3 What Sapp group for students and Faculty Members

The College Library has created group mail ids for students and faculty members, separately. It's been easy to communication them.

2.2.4 Online Public Access Catalogue

Koha is an open source software of Integrated Library Management System. It is an online database or combined catalogue of all davangere University college libraries. 4500 Records are stored such as Books, Journals, Theses etc. and search information for through author-wise, subject-wise, title-wise and ISBN etc.

2.2.5 Library Security

ADVS First Grade College Library has implemented CCTV (Closed-Circuit Television) systems, it can enhance security, deter criminal activity, and ensure the safety of patrons and staff. Library Security is crucial for safeguarding library resources, ensuring the safety of patrons and staff, and preventing theft, vandalism, or other unauthorized activities. CCTV (Closed-Circuit Television) systems can play a significant role in enhancing library security by providing surveillance and monitoring capabilities.

2.2.6 Internet Facility

College Libraries can effectively provide internet and Wi-Fi facilities that support the academic and research needs of their for users while ensuring security, reliability, and user satisfaction. It supports student's faculty, and researchers in accessing online resources, conducting research, and collaborating on academic projects.

2.2.7 Suggestion and Feedback Box

User feedback and suggestion are collected on all aspects of Library Services. Formally through Suggestion Box, Feedback forms and Library Services evaluation forms helps in collection development. Changes and improvement in facilities and services. Library is a service centre to support to the teaching, learning and research needs of the services, users. Apart from providing regular and routine services, it is necessary to provide new and improved services. Suggestion Box maintained near the circulation counter, it would help to get user feedback on services provided by the library.

3. LIBRARY EXTENSION BEST PRACTICE

3.1 Green Library

ADVS First Grade College library at ADVS Campus is creating a study atmosphere in a green environment. The college is using 04 acres of land around the library to create a clean area with new dimensions like informative boards, and pathways for heritage walks. The main goal is educating users and spreading awareness about sustainability through the green library web page, documentary projections, lectures, public discussions, and book promotions. The "Green Library Project" to provide better and more comfortable facilities/services to ADVS First Grade College library users in terms of

Read, Relax, Refresh. It is an eco- friendly library. 'Walk and Read'. 'Read and Relax'. 'Read and Refresh'.

3.2 Career Information Resource Centre

☐ Study centre for competitive Examinations-UGC NET, UPSC, KPSC, Banking etc.

☐ Sources on General Knowledge, General Aptitude, Functional English, Numerical Ability

☐ Guides and Question Bank Series Magazines covering Employment opportunities.

4. GENERAL BEST PRACTICES

4.1 Orientation Programme

The library conducts orientation programme for the fresher's to get acquainted with its resource Librarian or Assistant Librarian are explain the details of library for the fresher's. Using power point presentation. Apart from the above the librarian conducts orientation programme of online resources. The renowned publishers will be invited to explain on how to use their products with maximum level, which will enhance the staff and students to understand and utilize products effectively and efficiently.

4.2 Organizing Book Exhibition

The College Library is organizing book exhibition once in a year. Reputed publishers and leading book sellers in the city have been invited to take part in the exhibition, which help the staff and students to go through huge collections under one roof to recommend books for library purchase. The students can also recommend books, by which, the library meets the end-user's requirements. The book exhibition also facilities the staff and students to purchase books for their personal use at discount price.

4.3 Library Brochure

The library is publishing an information brochure once in a 2 year. This brochure will be distributed to all the Department and staff. The fresher can understand about the library and its facilities through this brochure. Library rules and regulations, membership, book borrowing details, book transaction time and other important information have been given in the brochure.

5. CONCLUSION

Best practices are a practice cover the way for enhancing the existing function and helps in effective implementation of the process. The importance of best practices in enhancing existing functions and facilitating the improvement or implementation of processes. You're also noting the positive outcomes that technology can bring to designing and delivering information products and services in a library setting. By adopting best practices in utilizing technology, libraries can optimize their operations, better serve their communities, and stay relevant in an increasingly digital world. In conclusion, libraries and information resource centers have transformed from passive repositories of knowledge to dynamic learning environments in the digital age. Through the integration of ICT and innovative educational practices, they empower learners to engage with information in new and meaningful ways, making them indispensable sites of learning in contemporary education.

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DEVELOPING 21ST CENTURY LIFE SKILLS AMONG ADOLESCENTS

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Abstract

Swami Vivekananda, Mathathma Gandiji gives more important to man making education with bundle of information in the particular area. The term 'Life skill'' refers to the skills need to make the most out of life. Life skills are usually associated with managing and living a better quality life. Life skills enable us to translate knowledge, attitude and values into actual abilities.

Life skills are abilities that enable adolescents to deal effectively with demands and challenges of every life. Adolescence is a time where in teenagers goes through a lot of physical and emotional changes. Their body begins to grow rapidly in shape and size. They also experience hormone change make them uncomfortable. If adolescents are equipped with life skills they will be able to cope with all such situations successfully.

This paper reflects on how to develop 21st Century life skills, which is very important for all learners especially for adolescents in today's challenging life. In fact life skills are the inevitable part of the modern era which is essential to sustain in the cut-throat competition through the Globe.

Key words: Life skills, 21st century skills, Adolescents

Life Skills:

Life skills are essential abilities that enable individuals to navigate everyday challenges, make informed decisions, and achieve their goals. According to the World Health Organization (WHO, 1999), life skills are "the abilities for adaptive and positive behavior that enable individuals to deal effectively with the demands and challenges of everyday life." These skills are crucial for students at the secondary education level, as they prepare to transition into adulthood and face various challenges in their personal and professional lives.

Academic performance is significantly enhanced when students possess strong life skills. Research has shown that students who develop life skills such as critical thinking, problem-solving, and communication tend to perform better academically (Durlak et al., 2011). Moreover, life skills promote social and emotional learning (SEL), which is critical for 3 students to develop healthy relationships, manage stress, and make informed decisions (Weare & Gray, 2003).

In addition to academic benefits, life skills play a vital role in career development and employability. Employers seek individuals who possess strong communication, teamwork, and problem-solving skills, among others (Mayer & Salovey, 1997). By developing these skills, students can increase their chances of success in the workforce. Furthermore, life skills such as time management, self-awareness, and self-regulation are essential for independent living and overall well-being (Kumar, 2017).

However, life skills are vital for students at the secondary education level. They enhance academic performance, promote social and emotional learning, develop critical thinking and problem-solving skills, foster effective communication and collaboration, support career development and employability, encourage healthy habits and well-being, and prepare students for independent living. By prioritizing life skills education, educators can empower students to succeed in all aspects of life

Need of Life Skills for Adolescents

      Adolescence is the most basic period of an individual. It indicates the transitional stage from youth to adulthood marked by obvious physical, cognitive, emotional and social changes. The inbuilt taboos exist in the general public in the form of command and supports from the near and dear ones guide the adolescents to grow in development. Ways of life have changed because of globalization and technology invasion from day to day affairs in a big way. The very focused, competitive world of today and the absence of traditional standards and support have increased the stress among adolescents resulting in various mental health issues such as depression, anxiety, loneliness, rejection, modesty, anger, conflicts in interpersonal relationship and failure.

Needs of awareness of life skills are:-

1. It is relatively simple to impart esteems and influence at this formative stage to
  create responsible and safe behavior in future life.

2. Peer pressures are exceptionally motivating factors in adoption of particular
  behavior patterns.

3. They are in a phase of experimentation. At this age, it empowers them to make
  informed and responsible choice about their ways of life.

4. Correct information and qualities imparted to one group of adolescents passes
  effortlessly to the next youngsters.

21st century Skills:

      21st century is the century of technology and innovations. Certain skills are essential to adolescents to be successful in 21st century. The term 21st century skills refers to a broad set of knowledge, skills, work habits and character traits that are believed by educators, school reformers and others to be critically important to succeed in today's world. These include personal, interpersonal or learning based skills such as Life Skills that will support to adolescents. Life Skills are essential for adolescents, for leading a productive and successful life.

These skills can be classified into three categories.

    Learning Skills (4c's): Teach students about the mental processes required to adapt and improve upon a modern work environment.

- Critical Thinking: Finding solutions to problems
- Creative Thinking: Thinking outside the box
- Collaboration: Working with others
- Communication: Talking to others

    Literacy Skills (ITM): Skills that help in creating and gaining new knowledge through reading, media and digital resources.

- Information Literacy: Understanding facts, figures, statistics, and data
- Media Literacy: Understanding the methods and outlets in which information is published
- Technology Literacy: Understanding the machines that make the Information Age possible

    Life Skill (FLIPS): Skills required for successfully leading an everyday life.

- Flexibility: Deviating from plans as needed
- Leadership: Motivating a team to accomplish a goal
- Initiative: Starting projects, strategies, and plans on one's own
- Productivity: Maintaining efficiency in an age of distractions

> Social and Cross-cultural Interaction: Meeting and networking with others for mutual benefit

Today's life and work environment require for more than thinking skills and content knowledge. The ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and carrier slats.

Review of related Literature:

The present study aims to investigate the relationship between life skills and school environment among secondary school students. Life skills are essential for students to succeed in academics and beyond. Research has shown that school environment plays a significant role in shaping students' life skills. This review of related literature examines recent studies on life skills among adolescents and secondary school students in India.

Eljo et al. (2023) found that the majority of respondents had a low level of overall life skill, which improved after intervention. Wahlang et al. (2022) observed that most adolescents in Child Care Institutions possessed a low level of life skill, with significant differences between male and female respondents. Sudha and Mythili (2022) found that most high school adolescents had average life skills, with a significant difference in life skills based on the medium of instruction. Raju and Rao (2022) evaluated the critical analysis of life skills among secondary school pupils and found that most pupils had an average level of life skills. Meenu & Rani (2021) observed significant gender differences in cognitive and interpersonal dimensions of life skills among secondary school students.

Essential Life Skills for Adolescents in 21st century:

1. **Digital Skills:**

Digital literacy enables children and young people to use and undertake technology, search for and manage information, create and share content, collaborate, communicate, build knowledge.

2. **Transferable Skills:**

These skills are called 'life skills', '21st century skills', 'soft skills', or 'socio-emotional skills'. These allow adolescents to become agile learners and global citizens equipped to navigate personal, social, academic and economic challenges. These include Self-awareness Empathy., Critical thinking, and Creative thinking, Problem –Solving, Communication, managing emotions, flexibility and leadership.

    i. **Self-awareness –** Student has to posse's attentiveness towards life, carefulness towards life, systematic planning about life will come under self awareness.

    ii. **Empathy –** Empathy is a deep sense of feeling about oneself. It means any agony faced by our relative or friend the other has to feel the same feeling is the empathetic attachment.

    iii. **Critical Thinking –** Student has to posses the capacity of thinking. Thinking can be applied to social issues or subject issues will be considered as critical thinking.

    iv. **Creative Thinking –** Creative thinking is thinking differently. The students have to diagnose any issue in different ways and ultimately choose the best one among all.

    v. **Problem Solving –** This problem solving method is applicable to both the social issues and academic issues. In this method the students have to use his cognitive capacities for solving the problem.

vi. **Interpersonal Relationship** – The relationship between the peer group, teachers, and family members should be maintained perfectly and positively. Students should cultivate harmonious relationships between the people.

vii. **Effective Communication** – Exchange of ideology between one people to another person and this vehicle is known as effective communication. The student has to develop their vocabulary, grammar and pronunciation to enhance their effective communication ability.

viii. **Coping with Stress** – Stress is a painful psychological threat to a person. In order to reduce stress the student has to cope up with the stress. Systematic planning in life will make to cope up with stress with students.

ix. **Coping with Emotions** – Negative emotions cause damage to the individual in both psychological and physiological ways. Students have to maintain tolerance for their negative emotions which is a positive sign for their development.

Mechanisms to build Life Skills in Class room:

Imparting Life Skills Education in classroom has been researched meticulously. In the light of the above literature review, now have been a proven fact that it has positive outcome when taught as a part of curriculum Yadav P, Iqbal N (2009) and Ravindra Prajapati (2017) There are various past research indications, over life skills be implemented as a training program, as an intervention approach and a model contributing to healthy development of adolescents.

Various mediums have been employed to inculcate life skills or 21 century skills such as sport, drama and fine arts, storytelling, experiential workshops, mentoring initiatives, interactive classroom learning and discussion. There have been multiple innovations in the delivery of life skills in recent times, through games and simulations, experiential activities, and technology.

Different activities that can be used to enhance Life Skills in Students are as follows:

Classroom Discussions: An activity providing opportunities for students to learn and practice turning to one another in solving problems. Enables students to deepen their understanding of the topic and personalize their connection to it. Discussion develops skills in listening, assertiveness, and empathy.

Brainstorming: It allows students to generate ideas quickly and spontaneously. Helps students use their imagination and think out of the box. Good discussion starter because the class can creatively generate ideas. It is essential to evaluate the pros and cons of each idea or rank ideas according to certain criteria.

Role Plays: Along with being a fun activity and involves whole class, to be active and participative, it also provides an excellent strategy for practicing skills; experiencing how one might handle a potential situation in real life; increasing empathy for others and their point of view; and increasing insight into own feelings.

Groups: Groups are helpful when the time is limited as it maximizes student input. Allows students interactions, allows to, know, one another better which in a way enhances team building and team work.

Educational Games and Simulations: It promotes fun, active learning, and rich discussion as participants work hard to prove their points or earn points. They require the combined use of knowledge, attitudes, and skills and allow students to test out assumptions and abilities in a relatively safe environment.

Analysis of Situation and Case Studies: It gives a chance, to analyze, explore, challenges, dilemmas and safely test solutions for; providing opportunities for working together in groups, sharing idea, new learning's and gives insight and promotes sometimes to see things differently.

Story-Telling: Can help students think about local problems and develop critical thinking skills, creative skills to write stories, or interact to tell stories. 'Story-Telling' lends itself to draw analogies or make comparisons, help discover healthy solutions. It also enhances attention, concentration, listening skills and develops patience and endurance.

Debates: Provides opportunity to address a particular issue in depth and creatively. Health issues lend themselves well: students can debate, for instance, whether smoking should be ban in public places in a community. It allows students to defend a position that may mean a lot to them. It offers a chance to practice higher thinking skills.

Role of Teacher in Life Skill Development:

The efficiency life skills are mainly depends on capabilities and attitudes of the teacher. Certain factors must be considered in the design of training programmes that help teachers incorporate soft skills into practice. Such capacity-building should explicitly provide opportunities for teachers to self-assess their own attitudes, values, and life skills proficiency, which strongly influence how they teach such skills to children. Teacher development has to allow for the practice and internalization of these skills, without which there will be a natural tendency to fall back upon familiar information-delivery teaching methods.

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EXPLORING THE RELATIONSHIPS BETWEEN BURNOUT, EMOTIONAL INTELLIGENCE, PERSONALITY FACTORS, MENTAL HEALTH, AND JOB SATISFACTION AMONG DEGREE COLLEGE TEACHERS

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Abstract

This study investigates the relationships between burnout, emotional intelligence, personality factors, mental health, and job satisfaction among degree college teachers. A mixed-methods approach was employed, combining survey data from 500 teachers with in-depth interviews. Results indicate significant correlations between burnout and emotional intelligence, neuroticism, and extraversion. Mental health concerns, such as anxiety and depression, were also linked to burnout. Job satisfaction was found to be negatively impacted by burnout and positively related to emotional intelligence. The study highlights the importance of addressing teacher burnout and promoting emotional intelligence, mental well-being, and job satisfaction in educational settings.

Key Words:- *Burnout, Emotional Intelligence, Personality Factors, Mental Health, Job Satisfaction*

INTRODUCTION:

Burnout, emotional intelligence, personality factors, mental health, and job satisfaction are interconnected aspects of teacher well-being. This study aims to explore these relationships among degree college teachers.

METHODOLOGY:

Examining the relationship between job satisfaction among degree college teachers and burnout, emotional intelligence, personality factors, andmental health was the aim of the current study. The present study utilized the descriptive research method for its investigation. To accomplish the goals of the current study, it was necessary to identify a representative population of college teachers and acquire the appropriate equipment for data collection.

The pertinent information regarding various areas of the study is provided below. The study utilized a descriptive method, incorporating both causal

comparative and correlation methodologies to perform research. The procedures necessitate the use of samples and specific research instruments for the execution of the investigation..

OBJECTIVES OF THE STUDY:

In the present paper the investigator to be formulate the following broad objectives.

1.To construct a tool for measuring emotional intelligence among degree college teachers.

2. To study the different levels of job satisfaction of degree college teachers.

3.To find out the different levels of emotional intelligence among degree college teachers.

4.To know the different levels of personality factors among degree college teachers.

5.To find out the different levels of mental health of Degree College teachers.

6. To study the different levels of burnout among degree college teachers.

7.To find out the significant difference between emotional intelligence and job satisfaction among degree college teachers.

8.To find out the significant difference between personality factors and burnout and job satisfaction among degree college teachers.

9.To study the significant difference between mental health and job satisfaction among degree college teachers.

10.To study the significant difference between burnout and job satisfaction among degree college teachers.

11.To find out the interaction effect of emotional intelligence on job satisfaction among degree college teachers.

12. To know the interaction effect of personality factors on job satisfaction among degree college teachers.

13. To find out the interaction effect of mental health on job satisfaction among degree college teachers.

14. To find out the interaction effect of burnout on job satisfaction among degree college teachers.

15. To find out the combined influence of emotional intelligence and personality factors on job satisfaction among degree college teachers.

16. To find out the combined influence of emotional intelligence and mental health on job satisfaction among degree college teachers.

17. To find out the combined influence of emotional intelligence and burnout on job satisfaction among degree college teachers.

18. To find out the combined influence of personality factors and mental health on job satisfaction among degree college teachers.

19. To find out the combined influence of personality factors and burnout on job satisfaction among degree college teachers.

20. To find out the combined influence of mental health and burnout on job satisfaction among degree college teachers.

21. To find out the relationship between emotional intelligence with job satisfaction among degree college teachers.

22. To find out the relationship between personality factors with job satisfaction among degree college teachers.

SAMPLING FLOW CHART

50 Degree colleges Affiliated with VSK UNIVERSITY, BALLARI

Selected 500 Degree College teachers based on Simple Random Sampling

RURAL (309) — URBAN (191)

Government — Private | Government — Private

Degree college teachers | Degree college teachers

Male (175) — Female (75) | Male (175) — Female (75)

Arts (105) — Science (75) — Commerce (68) | Arts (106) — Science (76) — Commerce (68)
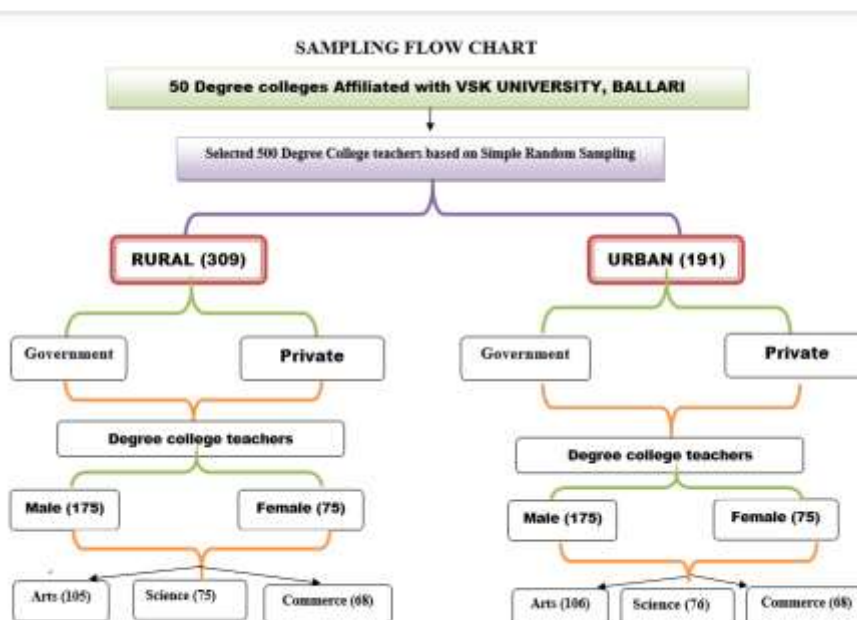
SAMPLE OF THE STUDY

The primary purpose of any research is to discover principles that have universal application, but sometimes the population is so large that it becomes impossible for undertaking whole ambit. In this regard sampling plays an important role in the research. The population of this study consisted of all permanent degree college teachers who were working in government and private (aided) degree colleges affiliated by Vijayanagara Sri Krishnadevaraya University of Ballari constituted the populace of the existing study. The colleges were located in urban and rural areas of Ballari, Vijayanagara and Koppal districts. A total 50-degree colleges chosen from three districts. For the contemporary study simple random sampling technique was adopted to select (350 male and 150 female) 500-degree college teachers selected as true representative. Sample included of male, female government, private, rural and urban degree college teachers teaching languages, physical sciences, life sciences, mathematics, commerce, computer science, business studies, and social science subjects. While selecting the sample care was taken to follow simple random sampling technique.

Locality	Frequency	Percent	Valid percent	Cumulative Percent
Rural	309	61.3	61.8	61.8
Urban	191	37.9	38.2	100
Total	500	99.2	100	

Graph 4.2 Type of locality
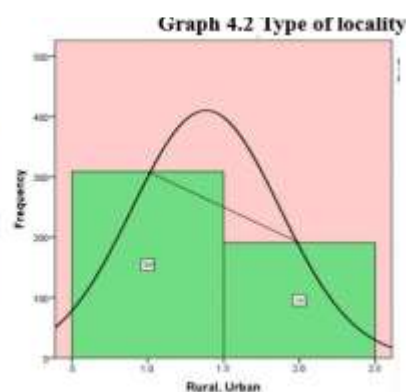
An observation from the above table and graph indicates the frequencies of male and female degree college teachers belonging to locality in which mean score is 1.38 and the standard deviation is 0.486. The percentage obtained for 309 rural is 61.3 and for 101 urban is 37.9, in this way it is to understand that the frequencies of locality for the present study is distributed.

Major findings of the Study:

Based on the analysis of the data following findings are drawn in the present study:

1. The male and female degree college teachers do not differ significantly with respect to Job Satisfaction.

2. The degree college teachers do not differ significantly in their Emotional Intelligence, Mental Health and Burn out where as they do differ with Personality factors. Therefore, there is a significant difference between male and female degree college teachers with respect to personality factors.

3. The degree college teachers serving in the locality of rural and urban colleges do not differ statistically with their Job Satisfaction.

4. The Govt. and Private degree college teachers do not differ significantly with their Emotional Intelligence, Personality Factors, Mental Health and Burn out towards Job Satisfaction.

5. The degree college teachers having different years of experiences between less than 10 years, between 11-20 years and more than 20 years differ significantly in their Job Satisfaction.

6. Male and female degree college teachers differ significantly in teaching experiences with respect to mental health and Job Satisfaction.

7. The significant effect is found between low and high level of Emotional Intelligence and Personality Factors on Job Satisfaction scores of degree college teachers.

8. It is found there are a statistically significant interaction effect of high and low Emotional Intelligence and Personality Factors on Job Satisfaction scores of degree college teachers.

9. A statistically significant interaction effect was found between low emotional intelligence high Personality Factors on Job Satisfaction scores of teachers of degree colleges.

10. The main effect of Mental Health on Job Satisfaction scores of degree college teachers were found statistical significant.

11. The investigator found significant interaction effect of Emotional Intelligence of low and high level on Job Satisfaction of degree college teachers.

12. The degree college teachers have a statistically significant interaction effect with respect to low Emotional Intelligence and high Mental Health on Job Satisfaction scores of teachers of degree college teachers.

13. A significant main effect was found between Emotional Intelligence and Burnout on Job Satisfaction scores of degree college teachers.

14. Also found statistically significant effect between low Emotional Intelligence and high Burnout on Job Satisfaction scores of teachers of degree colleges.

15. The significant interaction effect was found between Personality Factors with low and high level of Mental Health on Job Satisfaction scores of degree college teachers.

16. The significant interaction effect was found between Personality Factors with low and high level of Burnout on Job Satisfaction scores of degree college teachers.

17. Also found statistically significant interaction effect between high Burnout with low Personality Factors on Job Satisfaction scores of teachers of degree colleges.

18. A significant main effect was found amidst Mental Health and Burnout on job satisfaction scores of teachers of degree colleges.

19. A statistically significant interaction effect was found between high Mental Health and low Burnout and vice versa on job satisfaction scores of teachers of degree colleges.

20. The researcher found the positive and significant relationship between Emotional intelligence and Job Satisfaction scores of degree college teachers

21. The positive and significant relationship between Personality Factors and Job Satisfaction scores of degree college teachers.

22. The Mental health scores are increases (or decreases) with increases (or decreases) in Job Satisfaction scores. the Mental health and Job satisfaction of degree college teachers are influenced to each other.

DISCUSSIONS AND RESULTS:

The formulated hypotheses were tested through appropriate statistical techniques and found the results and the same were presented systematically. The findings of the present study on teaching experience found significant difference in relation to Job Satisfaction. There is no significant difference found between male and female degree college teachers with respect to Job Satisfaction.Significant correlations were found between burnout and emotional intelligence, neuroticism, and extraversion. Mental health concerns, such as anxiety and depression, were linked to burnout. Job satisfaction was negatively impacted by burnout and positively related to emotional intelligence.

Results of correlational analysis found there is a significant relationship between the selected variables and the demographic one. In this line the results of Hafsa Ahmed (2020) also to explored the relationship of emotional intelligence on the job satisfaction among university teachers and found the difference statistically. Gupta

CONCLUSION:

This study is significant since it examines the correlation between teachers' burnout and their emotional intelligence, personality traits, mental well-being, and job satisfaction. Teacher burnout impacts not just themselves but also their students. Teaching is recognized as a very stressful profession. This job's stressful conditions can lead to teacher burnout, manifesting in physical, psychological, and behavioural symptoms (Cunningham, 1982).

This study aims to investigate the presence of burnout syndrome among Indian teachers, a phenomenon commonly observed among teachers in Western countries. Simply said, stress and burnout significantly impact the quality and consistency of teaching. Nevertheless, most instructors remain committed, empathetic, and self-assured in their skills. Many individuals derive purpose from their jobs. Victor Frankl's hypothesis posits that individuals are capable of enduring any amount of stress, which could explain why certain instructors, even in very demanding settings, are able to prevent burnout

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YOGA IN EDUCATION

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Abstract

Yoga Asanas, Pranayama, Meditation, Mudras etc. should be made a part of daily life. Studies have shown that all physical and mental diseases of a person can be eradicated through this Sadhana.
The aim of this paper is to explain the relevance of yoga in education. Making yoga a part of the curriculum helps to minimize stress in children. It paves the way for students' success in life. Apart from an exercise, Yoga is also practiced as a competitive sport in the world today. Yoga competition is in various stages from school level to international level. By teaching Yoga along with other subjects in schools, it is possible to achieve better progress in the field of education and society.
Keywords: Education, Yoga, Mental Health

INTRODUCTION:

Education is increasingly becoming a challenge in the world we live in. Surrounded by mobile phones and other forms of modern technology that bring something new every day, accustomed to speed, frequent activity changes and bombarded with stimuli, children come to schools where the most common method is listening and transcribing from the blackboard while sitting at a desk for six hours.

In this busy world, physical and mental excellence is achieved by practicing arts and sports as extracurricular subjects as far as students are concerned. There is an urgent need for an education reform that would create a more conducive climate for learning in school and result in better outcomes.

What is YOGA

The word "Yoga" comes from Sanskrit and has the original meaning of '**Unite'** or Integration of Body and Mind. Bringing mind and body under control is called Yoga.

Yoga refers to the goal, unity and harmony with oneself and others, but also to the methods by which that goal is achieved.

One of the fundamental works of the philosophy of yoga is "Yoga Sutra of Patanjali". Patanjali shaped the Eight degrees of Yoga: Yama, Niyama, Asana, pranayama, Pratyahara, Dharana, Dhyana, Samadhi .

Yama and Niyama are tells about Ethical rules, Moral imperatives, Virtuous, Habits, Self-controls.

Asana tells about Postures and Gestures in Yoga practice. Pranayama tells about Control of Breath.

Prathyahara tells about Sensory withdrawal exercise. Dharana tells about Concentration, one-pointedness of mind. Dhyana tells about Reflection. Samadhi tells about putting together, joining.

YOGA IN DAILY LIFE :

Yoga is an essential thing in daily life of a man. By making yoga a daily routine, physical, mental and emotional benefits can be achieved. Yoga makes the body flexible, strengthens the body, supports the muscles, boosts immunity and provides good sleep. Yoga reduces stress and anxiety, it enhances thinking ability, supports emotional balance, improves focus and concentration.

Yoga enhances academic performance , overall quality of life , supports personal growth etc.

Practicing Yoga Asanas , Sooryanamaskar and Meditation daily it relieves tension and stress in the mind and body . Yoga gives energy to perform activities and keeps us fresh. Anyone can learn or practice Yoga regardless of age or gender.

IMPORTANCE OF YOGA IN EDUCATION

The importance of Yoga in Education cannot be ignored. Today's education mostly requires qualitative changes in Physical, Mental and Spiritual development of students in a balanced manner.

Students can develop moral values and peacefulness with highest goal of life as well as education.

The main benefits of Yoga in Education are discussed below:

1. Physical health

2. Balancing both hemisphere of the brain

3. Develop values

4. Healthy emotional development

5. Academic performance

6. Sharpen memory

7. Healthy living

8. Develop cognitive and affective domain

9. Improve senses

10. Integrated personality development

➤ *Decreases Stress and Anxiety*

Yoga routine reduces the stress and anxiety of students. They are busy with various subjects in schools as well as daily home works at home. Through the Yoga they can make relax their mind and body. With a peaceful mind, it is very likely that their performance in academics will also improve.

➤ *Increases Memory and Attention span*

Yoga is very effective in improving students' attention span and focus. Students can concentrate in their studies without deviating to other thought. The Meditation and Breathing exercise gives to them the clear path of attention.

➤ *Improves Flexibility , Balance and Posture*

Students are mostly sitting for hours for study or in-front of TV or lap top. These activities are affects their body and muscles. Yoga can most effectively help in correcting the posture, enhancing flexibility and improving balance and thus brings balance to their whole body. It will make them feel free even they sits long time in schools.

➤ *Augments self-control*

The union of mind and body is called Yoga. Yoga also teaches students self-control by skillfully controlling both their breathing and movements. Once the students learn the tricks of controlling their breath and movements, they do not act hastily and consequently keep their anger in check and make rational decisions when required.

➤ *Increases Self-confidence and Self-esteem*

Yoga gives the mental power as well as the mental ability and creativity to do activities. The confidence thus attained through yoga is then carried into the real world and makes the student strong, compassionate and acceptable.

Yoga is thus an effective exercise for school going kids as its benefits are multiple compared to the other forms of exercises. Yoga helps in inculcating in students discipline, values and good health. So yoga should be an everyday part of school life for its immense utility to the students.

CONCLUSION

Integrating yoga into a student's life offers numerous benefits that support their holistic development. From managing stress and improving concentration to fostering emotional well-being and building self-discipline, yoga serves as a valuable tool for students to thrive academically, emotionally, and physically. So, let's encourage students to embrace the transformative practice of yoga and witness the positive impact it has on their journey towards a balanced and fulfilling life.

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TEACHER EDUCATOR'S LIFE SKILLS DETERMINE THE LIFE SKILLS AMONG B.ED. STUDENTS AT PRE-SERVICE TRAINING

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Abstract

Life Skills is the new buzzword in education. From the government emphasizing the importance of life skills in NEP 2020, to increased awareness among education practitioners – especially through the pandemic – the conversation around life skills has gained momentum in India. There is a need to equip young people with essential life skills, but there is an even greater need to equip teachers with the same life skills. Only then would they be able to prepare the young people of India.

Learning needs to be seen as a holistic experience. Regardless of the curriculum they teach, teachers need to see themselves first and foremost as teachers of children – responsible for their overall development and well-being. To mentor and help students learn and embrace life skills, teachers must be trained and supported to teach life skills. We need to equip teachers with the necessary knowledge, skills, and attitudes to help them become great life skills teachers. Life skills can also inspire teachers to take care of their mental wellness, stay cognitively flexible, and be open-minded to change and innovation.

Teachers need a range of skills, including confidence, empathy, and strong communication. In higher education, incorporating life skills into the curriculum aims to help students connect their education to their social and professional lives. This conceptual paper highlights the essential skills that future teachers need to adopt.

Keywords: Life Skills, Secondary Education (B.Ed.) Student Teachers.

INTRODUCTION:

We often hear about job-related trainings for skill development in educational institutions and organizations. In addition to hard and soft skills, life skill training is essential for better self-esteem, emotional intelligence, and social intelligence. Every organization and institution should organize training programs to improve these abilities within individuals.

Life skills are essential for successful functioning in life. The World Health Organization has identified 10 life skills, including self-awareness, effective communication, empathy, coping with stress, problem-solving, decision-making, and critical thinking. These skills are necessary for personal growth, success, and survival in our competitive world. They are important for individuals of all backgrounds and professions, and there is a need to develop these skills among both youth and adults.

The goal of life skills education is to equip individuals with appropriate knowledge on risk-taking behaviors and develop skills such as communication, assertiveness, self-awareness, decision-making, problem-solving, and critical and creative thinking to protect them from abuse and exploitation (UNICEF, Citation 2015; WHO, Citation 1993).

"We are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the foundation of life. Many of the things we need can wait. The children cannot. Right now, is the time his bones are being formed, his blood is being made and his senses are being developed to him we cannot answer "tomorrow". His name is "today". Gabriela mistral, 1948

Fifty percent of teaching performance is based on interpersonal skills and fifty percent on knowledge. The Caliber of their life skills will improve the caliber of their teaching performance or methods. The

best teacher is life itself, but to learn from it, we need certain abilities. Skills are a crucial component of the learning system, regardless of our location or our goals.

As a teacher educator, the researcher identified the need to develop a specialized training course to provide teacher candidates with practical life skills training. This training program was created by researchers who recognized the necessity of life skills training for aspiring professionals, as the B.Ed. curriculum alone cannot adequately address the need for life skills to enhance self-esteem. Multiple studies have investigated the impact of this training on teacher candidates' self-esteem in greater detail. While the B.Ed. curriculum offers professional, hard skill, and soft skill training, it does not provide comprehensive life skills training to improve self-esteem, self-efficacy, adjustment, and various other abilities in teacher candidates.

The National Council for Educational Research and Training published a document called the National Curriculum Framework in the year 2000. National Curriculum Framework: 2000 (NCF: 2000, published by NCERT) and National Curriculum Framework for Teacher Education: 2009 (NCFTE: 2009) have rightly focused on life skills education among prospective teachers. The NCF provides the following guidelines for life skills education:

• The document sketched out four aspects of education in India. The first of these, "context and concerns" included a clause about "linking education with life skills and the world of work and value education" (NCERT, p. 12).

• True education is a process of developing the human personality in all its dimensions – intellectual, physical, emotional, social, moral, and spiritual (NCFTE, 2009:32).

• Every person can think and make ethical decisions independently or in a group. It is essential to sensitize students regarding emotions then only they can survive in the world of satisfaction. To understand others, cooperation, social responsibility, and good interpersonal relations are essential for prospective teachers. (NCFTE, 2009)

• NCF, 2005 acknowledged Adolescent Education and Life Skills linked to health, consumer rights, and legal literacy as important areas in school education and included them accordingly in the secondary school curriculum. After 2005, over countrywide debate, sex education was restructured as the Adolescence Education Programme (AEP) which focused on enhancing life skills among adolescents, so that they can be responsible for dealing the real-life situations. The NCF, 2005 clearly outlined that the AEP should not be practiced separately but rather be included in school education (NCFTE, 2009). The above abstract highlights the need for a life skills program for youth, adolescents, and teachers at all levels of education. There is a lack of life skills education in Indian schools, which mainly focus on numerical and literacy/language skills. The emphasis on cognitive development needs to shift to include reflective practices and psychological dimensions. To prepare students for the knowledge economy, they need to be able to apply their knowledge, analyze information, communicate, collaborate, solve problems, and make decisions. Teachers and school administrators play a crucial role in creating a learning environment that emphasizes practical exercises and activities. They should be trained in life skill elements to effectively address issues related to adolescents and youth.

Concept and Scope:

Life skills education aims to equip students with the tools to make wise decisions and lead fulfilling lives. It supports mental health, proactive safety measures, and social connections. This program helps young people understand themselves, evaluate their skills, and improve their functioning.

Need for the Study:

The B.Ed. curriculum has been continuously created, adjusted, and reviewed to help teacher candidates develop their effective teaching abilities. However, it's important to consider how much the course can contribute to the development of teacher candidates' personalities, self-worth, self-efficacy, and adaptability. Research shows that many recent graduates and even newly enrolled B.Ed. students have low self-esteem, and lack persistence, self-assurance, forbearance, and effective communication skills (Mishal, 2015).

IMPORTANCE OF LIFE SKILLS TO A TEACHER:

Life skills are of vital importance in all spheres of a teacher's life. A teacher performs life skills at school, classroom, or in any activity where everyday interests bring people together. Life skills are deeds used properly and responsibly in personal affairs. They are a set of human behaviors changed through teaching or experiences that are used to deal with everyday situations. Teacher needs the ability to act responsibly and control his/her emotions, and problems effectively and intelligently. Life skills enable teachers to become a facilitators, mentor, and knowledge provider.

Training Teachers To Teach Life Skills

There is extensive research and evidence that point to the singularly key role that teachers play in influencing learning and shaping young minds. The Indian education system is home to 9.7 million teachers. A large proportion of them have never had meaningful learning experiences themselves while in school and college, nor have they received the necessary training to prepare their students as creative, compassionate, courageous, thoughtful citizens of our country. According to UDISE data, only 1 in 4 teachers in India are trained to teach online classes, and about 22% of teachers are not even trained in primary education in India.

At the Life Skills Collaborative, we suggest a few methods to support the teacher community to help them adapt better and bring them up to speed with the ever-changing and complex demands being made of them:

- **Teacher needs assessment**: It is necessary to assess the professional development needs of teachers through their career trajectory, with changing societal and educational imperatives. We also need to offer appropriate solutions.

- **Professional Learning Communities**: Teachers share good practices and knowledge amongst themselves – at local, national as well as international levels. They could help each other identify the knowledge gaps within the education system while also learning from each other. This encourages communication as well as collaboration.

- **Continuing Professional Development:** Learning is a lifelong process and a teacher who stays abreast of new developments in education and constantly hones their skills will always stay relevant to new generations of learners. Attending workshops, webinars, writing blogs, and getting coaching support are all opportunities to learn and cumulatively make a huge difference in school ecosystems.

MAJOR COMPONENTS OF LIFE SKILLS:

I. **THINKING SKILLS**

1. Self-awareness
2. Problem-Solving
3. Dealing with Stress

II.   **SOCIAL SKILLS**
1. Interpersonal Relationship
2. Decision-Making
3. Creative Thinking
III.   **EMOTIONAL SKILLS**
1. Managing Emotions
2. Communication skill
3.   Empathy

The core set of life skills that help in promoting the health and well-being of children and adolescents are

Self-awareness: - Self-awareness involves recognizing oneself, including our character, strengths and weaknesses, desires, and dislikes. It helps us identify stress, improve communication, and develop empathy for others.

Problem-solving: - After making the decisions about available options, choosing the one which suits the best, following it through even in the face of impediments, and going through the process again till a positive outcome of the problem is achieved.

Coping with stress: - Dealing with stress involves identifying sources of stress, understanding its effects, and taking action to manage stress levels. Cultural and social factors influence the specific life skills needed to cope with stress, including gender-related differences in communication.

Interpersonal relationships: - Interpersonal relationship skills facilitate us to relate positively with the people we usually interact with. This means being able to make and keep friendly relationships, which can be of great importance to our mental and social well-being. It also includes keeping good relations with family members, which are an important source of social support.

Decision making - The process of assessing an issue by considering all possible/available options and the effects those different decisions might have on them.

Creative thinking: - Creative thinking allows us to consider various options and potential outcomes. It helps us respond adaptively to daily situations, even when no specific problem or decision is at hand.

Critical thinking: - It is an ability to analyze information and experiences objectively. Critical thinking can contribute to health by helping us to recognize and assess the factors that influence attitudes and behavior, such as values, peer pressure, and the media.

Coping with emotions: - Coping with emotions involves recognizing emotions in ourselves and others, being aware of how emotions influence behavior, and being able to respond to emotions appropriately. Intense emotions, like anger or sorrow, can have negative effects on our health if we do not react appropriately.

Effective communication: - Effective communication involves expressing thoughts and feelings verbally and non-verbally in a manner suitable for the cultural and situational context. This includes sharing opinions, desires, needs, and fears, and seeking advice and assistance when necessary.

Empathy: - Empathy is the ability to understand and accept others, even in diverse situations. It encourages nurturing behavior and tolerance towards those in need, such as AIDS sufferers or people with mental disorders.

PRACTICE OF 'LIFE SKILLS EDUCATION' IN CLASSROOM:

Research has shown that including life skills education in the classroom curriculum has positive outcomes. It can be implemented through various activities to enhance students' life skills :-

- **Classroom Discussions**: An activity, providing opportunities for students to learn and practice turning to one another in solving problems. Enables students to deepen their understanding of the topic and personalize their connection to it. Develops skills, in listening, assertiveness, and empathy.
- **Brainstorming**: It allows students to generate ideas quickly and spontaneously. Helps students use their imagination and think out of the box. Good discussion starter because the class can creatively generate ideas. It is essential to evaluate the pros and cons of each idea or rank ideas according to certain criteria.
- **Role Plays**: Along with being a fun activity and involving the whole class, to be active and participative, it also provides an excellent strategy for practicing skills; experiencing how one might handle a potential situation in real life; increasing empathy for others and their point of view; and increasing insight into own feelings.
- **Groups:** Groups are helpful when the time is limited as it maximizes student input. Allows students interactions, and allows them to, know, one another better which in a way enhances team building and teamwork.
- **Educational Games and Simulations:** They promote fun, active learning, and rich discussion as participants work hard to prove their points or earn points. They require the combined use of knowledge, attitudes, and skills and allow students to test out assumptions and abilities in a relatively safe environment.
- **Analysis of Situation and Case Studies**: Case studies offer opportunities to analyze, explore, and test solutions while working in groups. They promote critical thinking and decision-making skills and provide insights for confronting challenges.
- **Story-Telling:** This can help students think about local problems and develop critical thinking skills, and creative skills to write stories, or interact to tell stories. 'Story-telling' lends itself to drawing analogies or making comparisons, to help discover healthy solutions. It also enhances attention, concentration, and listening skills and develops patience and endurance.
- **Debates:** Provides an opportunity to address a particular issue in-depth and creatively. Health issues lend themselves well: students can debate, for instance, whether smoking should be banned in public places in a community. It allows students to defend a position that may mean a lot to them. It offers a chance to practice higher thinking skills

CONCLUSION

Life skills are crucial competencies that teachers need to impart to students. However, many teachers currently lack awareness of life skills. Therefore, it is essential for teacher education courses to include life skills in their curriculum for effective transmission to students.

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EFFECTS OF A MINDFULNESS BASED INTERVENTION ON MENTAL WELL-BEING AND QUALITY OF LIFE IN INDIAN CONTEXTS

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Abstract

Background: *In India, the burden of mental ill-health is ever increasing. There is an urgent requirement for the implementation of interventions to prevent psychosocial problems from getting manifested as psychiatric diseases. The researchers see potential in mindfulness, an evidence-based group therapy popular in Western countries. This study shares a ground-level experience with an eight-week face-to-face mindfulness-based intervention. The aim was to see the effects of mindfulness on anxiety, depression, and quality of life in Indian adults.*

Methods: *Participants were randomized into two groups (n=74): group M participated in the mindfulness program while group C attended placebo sessions. The Hospital anxiety and depression score (HADS) for anxiety and depression and WHO quality of life (WHO QOL 100) were measured pre-program and post-program. Statistical analysis used was the paired and unpaired t-Test and one-way ANOVA for the outcome variables.*

Results: *The HADS-A (anxiety) and HADS-D (depression) improved with p=0.0001 and p=0.0003 with the practice ofmindfulness.Inthemindfulnessgroup,domains1, 2, and 4 of WHO quality of life also improved post-sessionwith p<0.0001 when compared to the control group.*

Conclusions: *Mindfulness improved the anxiety, depression, and quality of life of Indian adults. Mindfulness holds initial promise for integration into community clinical practice. This study being an early attempt, further studies will be needed before widespread implementation in the country.*

Keywords: *Mindfulness-based intervention, Indian adults, Anxiety, Depression, Quality of life*

INTRODUCTION

Mental ill-health is among the leading cause of non-fatal disease burden in India.[1] Mental well-being is of critical importance and without mental health, there can be no true physical health.[2] In India, nearly 150 million need active mental interventions. The mental ill-health burden is on the increase due to the growing awareness and recognition in the societies, changing lifestyles, and biological vulnerabilities.[3] Mental infirmity sometimes creates a lifelong impact and result in a poor quality of life. In the Indian context, the clinical practice or the delivery of mental health services are mostly limited to secondary or tertiary levels of health care. A huge treatment gap exists as the preventive evidence-based options are limited.[4] A recent survey emphasized the importance of the implementation of preventive interventions at the community level.[1] Integration of community-based interventions with the existing setup will have the potential to reduce this treatment gap.[5] And most of the preventive interventions are only theoretical- based, its' high time for practical application of interventions to improve the mental health of the Indian community.[6] These evidence-based interventions will be the entry points to mainstream healthcare.

Mindfulness has been integrated into the mainstream health care of western countries since the 1970s.[7] Mindfulness was defined by Kabat-Zinn as "theawareness that arises when paying attention on purpose, in the present moment, and non-judgmentally".[8] Mind fulness was first implemented in a clinical setting as a group program called the mindfulness based stress reduction (MBSR). MBSR gave way to Mindfulness based interventions (MBIs) that are structured, practical- oriented, flexible, and modified for application indifferent community settings. Subsequent research found Mindfulness to reduce psychological symptoms, increase subjective well-being, and improve behavioral regulation.[9] But India has major social and cultural differences

from the West and the experience with mindfulness is limited. After an extensive search, nominal research with mindfulness can be traced in the non- clinical Indian population. The researchers in this study focus on the prevention of psychosocial problems of anxiety and depression prevalent in Indian societies from getting manifest ted as diseases. Mindfulness session shave the advantage of being conducted in a group without the involvement of psychiatric specialists/experts. India has already a shortage of specialists with 0.75 psychiatrists per 100,000, too meager a resource for the whole population.10Mindfulness sessions are not a replacement for established psychological/psychiatric therapies but can be a valuable addition to preventive mental health services. This study shares a ground-level experience with the practical application of mindfulness in an Indian community. It aims to see the impact of an eight-week face-to-face MBI on anxiety, depression (measured by Hospital anxiety and depression score; HADS) and quality of life (measured by WHO quality of life score; WHO-QOL 100) of apparently healthy Indian adults. The researchers formulate a hypothesis that Mindfulness will positively affect the anxiety, depression, and quality of life of the participants post-program.

METHODS

Study design and setting

The prospective randomized controlled study was conducted by a medical institution based in Ballari, Karnataka, India. It collaborated with a mindfulness centre to organize the face-to-face mindfulness program. The study period was July to August 2024. Institutional ethical clearance was obtained and written informed consent was taken from all participants. The trial was registered in the clinical trial registry of India.

Sample size calculation

Despite an extensive search, any previous data in the Indian setting with HADS and WHO-QOL100 was not found. The sample size was calculated based on non- Indian studies, on the assumption of a standard deviation (SD) of 11.53 and 3.365 of the expected difference of mean HADS and WHO QOL 100 from the previous non- Indian studies, with a power of >80% to detect this difference using Paired-t test, Unpaired-t test and one- way ANOVA, with type I error (α) of <5%.[11,12] The calculated minimum sample size came out as 28 each usingHADSand38eachusingWHO-QOLscore.Hence, we planned our study with 80 participants divided into 2 groups of 40 each. Information about the study was spread in the community and interested participants contacted the study-co-ordinator. Eighty participants were screened by the researchers, based on written responses to a questionnaire based on inclusion and exclusion criteria.

Inclusion and exclusion criteria

Inclusion criteria were age between 18 to 65 years, no major diagnosed physical illness, not undergoing any psychological therapy or any plans of it during the study period, no any significant drug history, level of education more than higher secondary standard with a basic understanding of English and have to be a resident of India. Exclusion criteria were; diagnosed psychiatric illness, previous experience with mindfulness or meditation. The selected participants were subjected to an interview with a clinical psychologist to exclude any major psychological illness that has escaped initial screening. There was a provision for referral to psychiatric specialists and those subjects were not included in the study. Total 80 participants were randomized into 2 groups; mindfulness (group M) and control group (group C), 40 in each group. Randomization was done using Random Number Tables of By Rand Corporation, USA©1955. Six participants in group C did not complete the pre-session formalities of data submission and were excluded from the study.

The40 candidates of group M were further sub-divided into two separate batches of 20 participants each and they participated in the MBI, on different days of the week. The 34 candidates in the control group attended "placebo" sessions. These placebo sessions involved instructions about self-care, of similar duration (where Mindfulness exercises and concepts were deliberately avoided) and were conducted by the same instructor. Candidates of the control group were later offered to join the MBI after the study period, which is beyond the scope of the present discussion. Attendance in at least six out of eight sessions was considered to be criteria of completion of the program. All candidates in group M and in group C completed the program. Final sample size was (n=40) for group M and (n=34) for group C (Figure 1).

Intervention

The 8 week MBI was a reflection of the original 8 week Mindfulness-based stress reduction (MBSR) program. The program consisted of an orientation session and eight main sessions, one session each week. The duration of the sessions was approximate two hours. The all-day silent re treat was not included. The mindfulness instructor was trained via the original MBSR course and other affiliated courses and had experience teaching Mindfulness for more than two years. The language of communication was English but the local language was used for some parts for better understanding. During the face-to-face sessions, formal meditation skills (body scan, sitting meditation), informal meditation skills (incorporation of mindfulness in daily activities), and mindfulness attitudes (acceptance, patience, letting go, non-judgemental, gratitude, compassion) were discussed and encouraged to bring in practice. The subjects were required to do a daily formal practice of meditation of thirty minutes and maintain a logbook. The daily practice of formal, informal, mindfulness activities and the homework assignments were monitored by the instructor. The group C participants doing placebo sessions maintained a similar schedule (excluding the Mindfulness exercises and concepts). Any participant experiencing any discomfort or adverse effect during the programme was asked to report to the instructor.

Outcome variables

Demographic data (age, sex) was collected at the beginning of the study. In addition, quantitative variables HADS and WHO QOL were measured at two time points; pre-session and post-session.9,13 HADS This scale was deliberately chosen as it is a reliable tool for community-level research work to screen anxiety and depression in primary care medical practice. HADS consists of a fourteen-item scale with seven items each for anxiety and depression subscales. Scoring for each item ranges from zero to three. A subscale score>8 denotes anxiety or depression.

WHOQOL 100 WHOQOL focuses on physical and mental health and the functional performance of individuals. WHO QOL has 4 domains: physical health (7 items), psychological health (6 items), social relationships (3 items), and environment (8 items), after computing the scores, they were transformed to a 0-100-scale.Any participant experiencing any discomfort was requested to report to the instructor. The overall experience of the participants post-program was noted as a subjective measure to serve as an indirect measure of acceptability of the mindfulness program in the study population.

Statistical analysis

Data of WHO-QOL and HADS were treated as continuous. Data were tested for equality of variance using Levene's test. Normality was confirmed using Shapiro-Wilk test. The analysis of continuous data was performed using Paired and Unpaired t-test and One-way ANOVA. Baseline

characteristics (age, sex) were tested using the Un-paired t-test and Chi-square (χ^2) test respectively. The statistical software used was SPSS Statistics for Windows 7® version 18.0.0 (Chicago, IL 60606-6412) and Graph Pad Prism® In Stat version 5.0. (California 92037-3219), Microsoft® Office Excel 2010 (Washington: Microsoft) was used to draw the Figures. Results were presented as mean (SD) and percentage format, $p < 0.05$ was considered statistically significant.

RESULTS

Base line characteristics

Out of 80 participants enrolled, 40 participated in the mindfulness intervention (Group M) and 34 acted as controls (Group C) (Figure 1). Baseline demographic characteristics (age, sex) were similar between the participants (Group M) and controls (Group C) (Table 1).
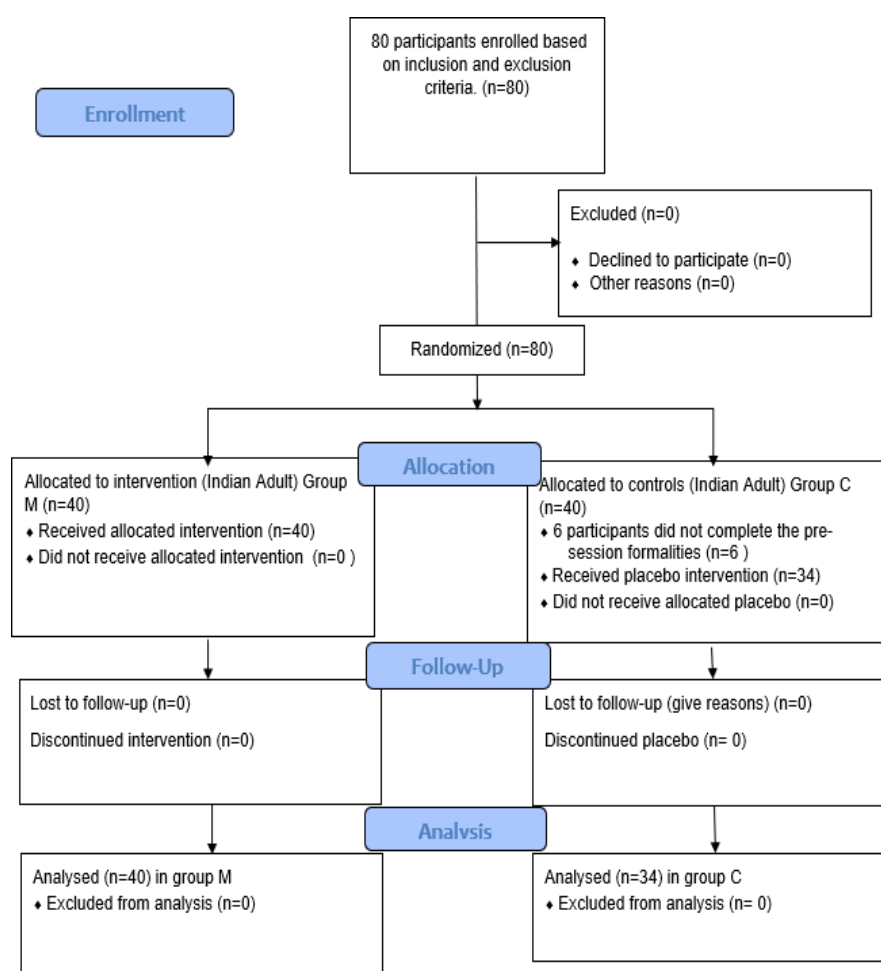

Figure1: Consort 2010 flow diagram of participants in the study.

HADS

The HADS was grouped into pre-session and post-session scores for each group (group M and group C). By Unpaired t-test, the mean scores in group M when compared to group C (post-

session) differed significantly in HADS-A (anxiety) and HADS-D (depression) with p<0.0001 and p=0.0003 respectively. By Paired t-test, the mean scores in post-session differed significantly only in group M compared to respective pre-session scores with p<0.0001 in both HADS-A and D (Table 1). The above tests were followed up by one-way ANOVA which also showed that HADS Scores were also significantly lower in post-session group M compared to other scores in HADS-A and D with p=0.000.

Table1:Representation of demography (age, sex), WHOQOL (4domains), HADS (anxiety and depression) of the study participants.

Groups		GroupM(n=40) Mean (SD)/ N (%)	GroupC(n=34) Mean (SD)/ N (%)	Unpaired t test p value	ANOVA	
					F statistic	P value
	Age(years)	49.70 (10.49)	50.20 (10.66)	0.8398		
	Sex	M=14(35.00) F=26 (65.00)	M=15(44.12) F=19(55.88)	0.4233		
BASIC CHARACT ERISTICS						
	Domain1					
	Pre-session	61.8 (13.51)	61.26 (11.86)	0.8568	9.0185	<0.0001
	Post-session	73.37 (10.51)	61.97 (12.57)	<0.0001		
	Pairedt-testp value	<0.0001	0.1032			
	Domain2					
	Pre-session	55.95 (9.89)	54.82 (10.30)	0.6323	17.5359	<0.0001
	Post-session	69.05 (11.38)	54.47 (9.89)	<0.0001		
	Pairedt-testp value	<0.0001	0.5351			
	Domain3					
	Pre-session	58.8 (16.25)	58.5 (15.47)	0.9357	1.3815	0.2509
	Post-session	64.72 (15.26)	60.26 (13.68)	0.1932		
WHOQOL	Pairedt-testp value	<0.0001	0.4585			
	Domain4					
	Pre-session	62.17 (8.24)	61.38 (7.28)	0.666	5.3147	0.0017
	Post-session	68.55 (10.75)	62.47 (8.76)	0.0103		
	Pairedt-testp value	<0.0001	0.4732			
	Anxiety					
	Pre-session	7.77 (3.10)	8.17 (3.20)	0.5968	15.3467	<0.0001
	Post-session	4.15 (2.63)	7.38 (2.75)	<0.0001		
	Pairedt-testp value	<0.0001	0.1034			
	Depression					
HADS	Pre-session	6.75 (3.55)	7.23 (3.69)	0.5952	8.0994	0.0001
	Post-session	3.77 (3.43)	6.61 (2.95)	0.0003		
	Pairedt-testp value	<0.0001	0.1115			

WHO-QOL100scores

The WHO-QOL scores were grouped into pre-session and post-session scores for each group (group

M and group C). By Unpaired t-test, the mean post-session scores in Group M when compared to group C differed significantly in domain 1,2 and 4 of WHO-QOL with $p<0.0001$ in domain 1,2 and $p<0.0103$ in domain 4. By Paired t-test, the mean post-session scores of group M differed significantly compared to respective pre-session scores with $p=0.0001$ in all domains of WHO-QOL (Table 1).

The above tests were followed up by one-way ANOVA which also showed that WHO-QOL scores were also significantly higher in post-session Group M compared to other scores in domain 1,2 and 4 with $p<0.0001$ indomain1,2andp=0.0017indomain4.Therewere no significant differences in mean scores of domain 3 WHO QOL in group M when compared to group C. One-way ANOVA result within domain 3 WHO-QOL was also not significant. No discomfort or side effect was reported by any participant during the program.

DISCUSSION

The results of the study support the hypothesis formed. The MBI caused a significant improvement in anxiety ($p<0.0001$) and depression ($p=0.0003$) components of post-session HADS scores, compared to the control group. Mindfulness significantly improved the physical ($p<0.0001$),psychological ($p<0.0001$),and environmental ($p=0.0103$) domains of WHO QOL with not much effect in the social domain as compared to the control group.

The improvements in the psychological domain of WHO QOL and the effects on anxiety and depression components of HADS indicate the positive impact of Mindfulness on the mental wellbeing of the participants. Mindfulness appears to be culturally acceptable as evident from written comments of participants post- program. The effects on anxiety and depression are comparable to prior research work from other countries. Previous studies found Mindfulness to be effective on anxiety and depression in Spanish university students and Danish women.[14,15] The significant positive impact on anxiety and depression perhaps reflects the huge burden of underlying sub-clinical mental diseases in the Indian community.[5] A previous study found mindfulness interventions targeted at subclinical symptoms of mental disorders to be more beneficial.[16] The impact of Mindfulness on WHO QOL is consistent with results in Taiwanese and Iranian patients and in patients with Parkinson's disease.[12,17,18] A few Indian studies mention its application in specific domains like to treat depression in diabetes mellitus, to lower intraocular pressure, use in gastro-oesophageal reflux patients and in pregnant women, but the experience with the non-clinical population in a clinical setting are minimal.[19-23]

In India the problems related to mental health are multi- dimensional. There are a lot of myths and stigmas associated with mental health problems.[24] This leads to improper utilization of existing mental health services.[25] So community-based interventions are to play a pivotal roleinclinicalpracticeinthe near future.[26]Thereisalack of practical implementation of evidence-based preventive models in the Indian scenario.[27] Mindfulness appears to have a few additional advantages as a preventive intervention in the Indian context. The mindfulness-based interventions are available within the community itself. Perhaps a shift from individual therapies to group-based therapies may help in increasing the acceptability. Moreover, it can reach out to a large number of people at a point of time, beneficial for a populous country like India.

The mindfulness concepts and exercises though completely new to Indian participants were well understood and accepted by the participants. The difficulties faced in this early study were to keep the participants' commitment going for a period of two months, maintain interest in the control group, and problems faced by debilitated participants in physical attendance. But the delivery of programs at the

community level was a welcome step to overcome the stigma and unwillingness to go to formal mental health setups. These programs acted as referrals to the mainstream mental healthcare system breaking the current trend of seeking professional help as the last resort.

Mindfulness is only an additional tool and not a panacea to multi-level mental health problems in the Indian context. Individuals with a diagnosed psychiatric illness need to be treated by psychiatric specialists and no one doubts this notion. The researchers neither promote mindfulness as a one-size-fits-all intervention for all subclinical psychological issues nor claim any superiority over other evidence-based therapies.[28,29]

Comparison with other standard therapies was beyond the scope of this study. The motive behind this research work was only to explore the practical implementation of mindfulness in community clinical practice in the Indian context. These type of evidence-based preventive interventions at the community level will be the effective access point to secondary and tertiary mental care.

CONCLUSION

Mindfulness shows initial promise as a preventive community-based intervention to improve anxiety, depression, and quality of life of Indian adults. This study opens up the possibilities of integration of Mindfulness into community clinical practice and this needs to be substantiated by further research.

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DIGITAL LITERACY IN EDUCATION

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Abstract

Digital literacy is crucial in modern education, enhancing learning experiences and preparing students for a technology-driven world. Integrating digital literacy develops critical thinking, problem-solving, and collaboration skills. It bridges the digital divide, promotes equity, and increases student engagement. Effective digital literacy education fosters creativity, innovation, and lifelong learning. This essential skillset empowers students for academic, professional, and personal success.

Introduction

Digital literacy has become a vital component of modern education, empowering students to navigate the digital world effectively. As technology advances, digital literacy enables learners to access, evaluate, and create information. Integrating digital literacy into education enhances learning experiences, fosters critical thinking, and develops essential skills. Digital literacy bridges the gap between traditional teaching methods and the digital landscape. It prepares students for the digital workforce, promoting career readiness and lifelong learning. Effective digital literacy ensures responsible online behavior, cyber safety, and digital citizenship. Educators must prioritize digital literacy to create inclusive, interactive, and engaging learning environments. By incorporating digital literacy, schools can address the digital divide and equip students with 21st-century skills. Digital literacy is no longer a luxury but a necessity for academic and professional success. By embracing digital literacy, education can unlock new opportunities for growth, innovation, and global connectivity.

Digital Literacy

Digital literacy term was initially introduced by Paul Gilster in his book Digital literacy in 1997. He defined digital literacy as the capacity to understand information and make use of it via computers and internet in multiple formats.

According to UNESCO

Digital literacy refers to the ability to understand and use digital technologies in a critical, creative and responsible way

According to International Society for Technology in Education.

Digital literacy is ability to use digital tools to locate, evaluate, and use information effectively.

According to American Libreary Association.

Digital literacy task force defines digital literacy as "The ability to use information and communication technologies to find evaluate create and communicate information, requiring both cognitive and technical skills."

Importance of digital literacy

1. Critical thinking and analysis
2. Technical proficiency
3. Creative expression
4. Information literacy
5. Media literacy
6. Social participation

7. Cultural competence
8. Responsible digital citizenship

Why we Need Digital literacy in education

Digital literacy is built on the expending role of social science research in the field of literacy as well as on visual literacy and computer literacy and information literacy.

Compelling reasons why digital literacy is essential in education:

Student Benefits

- Future career readiness
- Enhanced learning experiences
- Improved research skills
- Increased collaboration and communication
- Development of critical thinking, problem-solving, and creativity skills

Educational Benefits

- Personalized learning experiences
- Increased accessibility for students with disabilities
- Efficient assessment and feedback mechanisms
- Enhanced teacher productivity and organization
- Improved student engagement and motivation

The 4 Main Principle of Digital Literacy

- Comprehension: The first principle is comprehension and refers to the ability for readers of digital media to be able to understand its content. Today, the world exists in an interconnected state.
- Interdependence: Digital media consumption is now a part of our everyday lives. The term interdependence reflects how one media form connects with another. The proliferation of digital devices has made it easier to consume content from mediums.
- Social Factors: In the word of social media, there are a variety of social factors that can affect how messages are perceived in the digital world. Understanding these social factors is key to understanding the success of types of media.
- Curation: Anyone who has saved a pin to a Pinterest board understands the concept of digital curation. Curation refers to finding, organizing and saving media in away that makes it easier to access and use this information in the choices.

Government Initiatives to improve Digital Literacy:

The government has taken numerous initiatives to strengthen digital literacy in India. Some of the endeavors are:

- Bharat Net Project: Bharat Net, one of the largest rural telecom projects in the world, was phased in to all Gram Panchayats (approximately 2.5 lakh) in the country in order to provide non-discriminatory access to broadband connectivity to all telecom service providers. Union Cabinet approved this project on 25.10.2011 and on 30.04.2016, the Telecom Commission approved to implement this project in three steps.
- National Digital Literacy Mission (2014): The Department of Electronics and Information Technology, under the Ministry of Communication & Information Technology, launched a program for IT mass literacy in 2014 with the vision to empower at least one member of every

family with crucial digital literacy skills. The act to develop the skills they need to live in a world that is becoming more and more digital.

- Digital Saksharata Abhiyan: The second phase of the NDLM program, named as Digital Saksharata Abhiyan (DISHA) was started in December 2014 with the aim of providing basic digital literacy skills to 42.50 lakh people including government functionaries like ASHA, Anganwadi workers and Ration dealers. Over 87.68 lakh were trained and 53.46 lakh citizens were certified under the scheme for digital literacy training by October 2016.

- Digital India: Prime Minister Narendra Modi launched the Digital India campaign on 1stjuly 2015, under the Ministry of Electronics and Information Technology and Ministry of Finance. The vision of this campaign is making the country digitally empowered in electronically by improved online infrastructure and by expanding internet connectivity.

- Internet Saathi Program: This program was launched in 2015 by Google India and Tata Trusts, under Ministry of Electronics & Information Technology. The main aim of this program is to improve digital literacy among women of rural areas. Women from villages are trained on internet usage and they are made equipped and given access to digital work as instructors and help other women in their village in beginning their internet journey and get benefit from it

Conclusion

Digital literacy has become a vital component of modern education, empowering students to navigate the digital landscape effectively. By integrating digital literacy into the curriculum, educators can enhance learning experiences, promote critical thinking and problem-solving skills, and prepare students for a technology-driven workforce. Digital literacy also bridges the digital divide, increases student engagement, and fosters creativity, innovation, and lifelong learning. Furthermore, it equips students with essential skills such as digital citizenship, online safety, and media literacy, enabling them to participate responsibly and effectively in the digital world. As technology continues to evolve, educational institutions must prioritize digital literacy to ensure students remain competitive and adaptable in an increasingly digital society.

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ಸಮಕಾಲೀನ ಸಕ್ರಿಯ ಬೋಧನಾ ವಿಧಾನಗಳು: ಅನ್ವಯಿಕತೆ ಮತ್ತು ಕಾರ್ಯಯೋಜನೆಗಳ ಅನುಷ್ಠಾನ

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ಸಾರಾಂಶ

ಬೋಧನಾ ವಿಧಾನಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅಪೇಕ್ಷಿತ ಕಲಿಕೆಯ ಗುರಿಗಳನ್ನು ಸಾಧಿಸಲು ಸಹಾಯ ಮಾಡುವ ವಿಧಾನಗಳಾಗಿವೆ, ಆದರೆ ಚಟುವಟಿಕೆಗಳು ಈ ವಿಧಾನಗಳನ್ನು ಕಾರ್ಯಗತಗೊಳಿಸಲು ವಿವಿಧ ಶೈಲಿಗಳನ್ನು ಬಳಸಿಕೊಳ್ಳುತ್ತವೆ. ಬೋಧನಾ ವಿಧಾನಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ವಿಷಯವನ್ನು ಚೆನ್ನಾಗಿ ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು ಮತ್ತು ನಿಜ ಜೀವನದಲ್ಲಿ ಅದರ ಅನ್ವಯದ ಬಗ್ಗೆ ಕಲಿಯಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

ಶಿಕ್ಷಕರು ನಿಸ್ಸಂದೇಹವಾಗಿ ನಮ್ಮ ಸಮಾಜದ ಅತ್ಯಂತ ಶ್ರೇಷ್ಠವಾದ ವ್ಯಕ್ತಿಗಳಲ್ಲಿ ಒಬ್ಬರು. ಅವರು ಭವಿಷ್ಯದ ಪೀಳಿಗೆಗೆ ಜೀವನದಲ್ಲಿ ಒಂದು ಉದ್ದೇಶವನ್ನು ಕಂಡುಕೊಳ್ಳಲು ಸಹಾಯ ಮಾಡುತ್ತಾರೆ ಆದರೆ ತರಗತಿಯ ಹೊರಗಿನ ಸ್ಪರ್ಧಾತ್ಮಕ ಪ್ರಪಂಚದ ಸವಾಲುಗಳಿಗೆ ಅವರನ್ನು ಸಿದ್ಧಪಡಿಸುತ್ತಾರೆ. ಬೋಧನೆ ಮತ್ತು ಬೋಧನಾ ಚಟುವಟಿಕೆಗಳು ವಿಶಿಷ್ಟವಾಗಿ ಸಾಮಾನ್ಯ ತತ್ವಗಳು, ಶಿಕ್ಷಣಶಾಸ್ತ್ರಗಳು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪರಿಣಾಮಕಾರಿ ರೀತಿಯಲ್ಲಿ ಶಿಕ್ಷಣ ನೀಡಲು ತರಗತಿಯಲ್ಲಿ ಶಿಕ್ಷಕರು ಬಳಸುವ ಉಲ್ಲೇಖಿತ ಮಾರ್ಗಗಳಾಗಿವೆ. ಶಿಕ್ಷಕರು ಹಾಗೂ ಪಠ್ಯಕ್ರಮದ ಶೈಕ್ಷಣಿಕ ತತ್ವಗಳು, ತರಗತಿಯ ಜನಸಂಖ್ಯಾಶಾಸ್ತ್ರ ಮತ್ತು ವಿಷಯ ಕ್ಷೇತ್ರಗಳಂತಹ ವಿವಿಧ ಅಂಶಗಳ ಆಧಾರದ ಮೇಲೆ ಇವುಗಳನ್ನು ಆಯ್ಕೆ ಮಾಡಲಾಗುತ್ತದೆ.

ಈ ಪತ್ರಿಕೆಯ ಉದ್ದೇಶವು ಬೋಧನೆಯ ಸಾಂಪ್ರದಾಯಿಕ ವಿಧಾನಗಳು ಮತ್ತು ಬಹು ಮಾಧ್ಯಮಗಳನ್ನೊಳಗೊಂಡ, ಬೋಧನೆಯನ್ನು ಮೌಲ್ಯಮಾಪನ ಮಾಡುವುದು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಜ್ಞಾನವನ್ನು ನೀಡಲು ಪ್ರಯತ್ನಿಸಬಹುದಾದ ಬೋಧನಾ ವಿಧಾನಗಳನ್ನು ಸೂಚಿಸುವುದು ಮತ್ತು ಚರ್ಚಿಸುವುದು. ಮೂಲಭೂತವಾಗಿ ಬೋಧನೆಯ ಮಾಹಿತಿಯನ್ನು ಕಳುಹಿಸುವ ಮತ್ತು ಸ್ವೀಕರಿಸುವ ಎರಡು ಪ್ರಮುಖ ಅಂಶಗಳನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಅಂತಿಮವಾಗಿ, ಒಬ್ಬ ಶಿಕ್ಷಕನು ತಾನು ಅರ್ಥಮಾಡಿಕೊಂಡ ರೀತಿಯಲ್ಲಿ ಜ್ಞಾನವನ್ನು ನೀಡಲು ತನ್ನ ಅತ್ಯುತ್ತಮ ಪ್ರಯತ್ನವನ್ನು ಮಾಡುತ್ತಾನೆ. ಆದ್ದರಿಂದ, ಉದ್ದೇಶವನ್ನು ಪೂರೈಸುವ ಯಾವುದೇ ಸಂವಹನ ವಿಧಾನಗಳನ್ನು/ಚಟುವಟಿಕೆಗಳನ್ನು ಬೋಧನೆಯ ನವೀನ ವಿಧಾನಗಳೆಂದು ಪರಿಗಣಿಸಬಹುದು. ನವೀನ ವಿಧಾನಗಳ ಬಳಕೆಯು ಶಿಕ್ಷಣವನ್ನು ಸುಧಾರಿಸಲು ಮಾತ್ರವಲ್ಲ, ವಿದ್ಯಾರ್ಥಿಗಳ ವಿಷಯಗಳನ್ನು ಸಬಲೀಕರಣಗೊಳಿಸಲು, ಜ್ಞಾನವನ್ನು ಬಲಪಡಿಸಲು ಮತ್ತು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ತಲುಪುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಹೊಂದಿದೆ.

ಪತ್ರಿಕೆಯ ಮಖ್ಯ ಸೂಚಿ : ಬೋಧನೆ, ಸಾಂಪ್ರದಾಯಿಕ ವಿಧಾನ ಮತ್ತು ಬಹು ಮಾಧ್ಯಮ.

ಪೀಠಿಕೆ :

ಸೃಜನಶೀಲತೆ ಬೋಧನಾ ವಿಧಾನಗಳು ವಾಸ್ತವವಾಗಿ ತರಗತಿಯಲ್ಲಿ ಹೊಸ ವಿಧಾನಗಳು ಅಥವಾ ತಂತ್ರಗಳನ್ನು ಬೋಧನೆಯ ರೂಪದಲ್ಲಿ ಪರಿಚಯಿಸುವ ಪ್ರಕ್ರಿಯೆಯಾಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಆಲೋಚನಾ ಕೌಶಲ್ಯಗಳನ್ನು ವಿಶೇಷವಾಗಿ ಸೃಜನಶೀಲ ಚಿಂತನೆಯ ಕೌಶಲ್ಯಗಳನ್ನು ರಚಿಸುವ ರೀತಿಯಲ್ಲಿ ಸೂಚನೆಗಳನ್ನು ನಿರ್ಮಿಸುವ ಮತ್ತು ಕಾರ್ಯತಂತ್ರ ರೂಪಿಸುವ ಪ್ರಕ್ರಿಯೆಯನ್ನು 'ಸೃಜನಶೀಲ ಬೋಧನೆ' ಎಂದು ಕರೆಯಲಾಗುತ್ತದೆ. ಮೂಲ ಚಿಂತನೆ ಮತ್ತು ಕ್ರಿಯೆಯ ಬೆಳವಣಿಗೆಗೆ ಸಂಬಂಧಿಸಿದ ಕಲಿಯುವವರ ಬೆಳವಣಿಗೆಯನ್ನು ಉತ್ತೇಜಿಸುವ ಕಾದಂಬರಿ ಮತ್ತು ಉಪಯಕ್ತ ರೀತಿಯಲ್ಲಿ ಕಲಿಸುವ ಕ್ರಿಯೆ. ಸೃಜನಾತ್ಮಕ ಬೋಧನೆಯು ಕಲಿಕೆಯನ್ನು ವರ್ಗಾಯಿಸಲು ಶಿಕ್ಷಕರು ಬಳಸುವ ವಿಧಾನಗಳು ಮತ್ತು ಆ ವಿಧಾನಗಳು ವಿದ್ಯಾರ್ಥಿಗಳ ಮೇಲೆ ಒಟ್ಟಾರೆ ಪ್ರಭಾವ ಮತ್ತು ನಿರೀಕ್ಷಿತ ಫಲಿತಾಂಶಗಳ ಮೇಲೆ ಕೇಂದ್ರೀಕರಿಸುತ್ತದೆ. ಶಾಲೆ, ಕಾಲೇಜು ಮತ್ತು ಉನ್ನತ ಶಿಕ್ಷಣದಲ್ಲಿ ಸೃಜನಾತ್ಮಕ ಸಮಸ್ಯೆ ಪರಿಹರಿಸುವ ಕೌಶಲ್ಯ ಅಭಿವೃದ್ಧಿ ಅಗತ್ಯವಾಗಿದೆ, ಉನ್ನತ ಶಿಕ್ಷಣದಲ್ಲಿ ಹೊಸ ತನಿಖೆಯ ಸಮಗ್ರ ಸಂಗ್ರಹವು ಸೃಜನಶೀಲತೆ, ಸಮಸ್ಯೆ ಪರಿಹಾರ ಮತ್ತು ಶಿಕ್ಷಣ ಚೌಕಟ್ಟಿಗೆ ಪ್ರಾಮುಖ್ಯತೆಯನ್ನು ನೀಡುತ್ತದೆ. ಸೃಜನಶೀಲತೆಯು ಕೌಶಲ್ಯ ಅಥವಾ ಕಲ್ಪನೆಯನ್ನು ಬಳಸಿಕೊಂಡು ಹೊಸ ವಿಷಯಗಳನ್ನು ಉತ್ಪಾದಿಸುವ ಸಾಮರ್ಥ್ಯವಾಗಿದೆ. ಸಮಸ್ಯೆಯ ಒಂದಕ್ಕಿಂತ ಹೆಚ್ಚು ಪರಿಹಾರಗಳನ್ನು ಹೊಂದಿದೆ ಮತ್ತು ಸೃಜನಶೀಲ ವ್ಯಕ್ತಿಗಳು ಮುಕ್ತ ಮನಸ್ಸಿನವರು ಮತ್ತು

ನವೀನರು. ಕಲಿಕೆಯ ಬೋಧನೆಯೊಂದಿಗೆ ಸೃಜನಶೀಲತೆ ಸಹಕರಿಸಿದಾಗ ಅದು ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಸಮಾಜವು ಹೆಚ್ಚು ಬೆಳೆಯಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

ಸೃಜನಾತ್ಮಕ ಬೋಧನೆಯ ಪ್ರಾಮುಖ್ಯತೆಗಳು :

- **ಕ್ರಿಯಾತ್ಮಕ ಬೋಧನೆ ಮಕ್ಕಳನ್ನು ಕಲಿಯಲು ಪ್ರೇರೇಪಿಸುತ್ತದೆ:** ಕಲಿಯುವವರು ಸೃಜನಶೀಲ/ಕ್ರಿಯಾತ್ಮಕ ಗುರಿಗಳ ಮೇಲೆ ಕೇಂದ್ರೀಕರಿಸಿದಾಗ, ಅವರು ತಮ್ಮ ಕಲಿಕೆಯಲ್ಲಿ ಹೆಚ್ಚು ಬಲಶಾಲಿಯಾಗುತ್ತಾರೆ ಮತ್ತು ಅದನ್ನು ಸಾಧಿಸಲು ಅಗತ್ಯವಿರುವ ವಿಭಿನ್ನ ಕೌಶಲ್ಯಗಳನ್ನು ಪಡೆಯಲು ಹೆಚ್ಚು ಪ್ರೇರೇಪಿಸುತ್ತಾರೆ.

- **ಕ್ರಿಯಾತ್ಮಕ ಬೋಧನೆ ಮೆದುಳನ್ನು ಉದ್ದೀಪನಗೊಳಿಸುತ್ತದೆ:** ಶಿಕ್ಷಕರ ಕ್ರಿಯಾತ್ಮಕ ಬೋಧನೆಯು ಕಲಿಯುವವರಿಗೆ ಹೊಸ ಆಲೋಚನೆಗಳನ್ನು ಅವರ ಹಿಂದಿನ ಜ್ಞಾನದೊಂದಿಗೆ ಸಂಪರ್ಕಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ, ಅದು ಕಲಿಕೆಯನ್ನು ಅಂಟಿಕೊಳ್ಳುತ್ತದೆ. ಕಲಿಯುವವರು ಈಗಾಗಲೇ ತಿಳಿದಿರುವ ಜ್ಞಾನವನ್ನು ಅಂಟಿಸಲು ಸ್ಥಳವಿಲ್ಲದಿದ್ದರೆ, ಕಲಿಯುವವರು ಅದನ್ನು ತಮ್ಮ ಭಾಗವನ್ನಾಗಿ ಮಾಡಿಕೊಳ್ಳುವುದು ಕಷ್ಟ.

- **ಕ್ರಿಯಾತ್ಮಕತೆ ಭಾವನಾತ್ಮಕ ಬೆಳವಣಿಗೆಗೆ ಸಹಾಯ ಮಾಡುತ್ತದೆ:** ಸೃಜನಶೀಲ ಪ್ರಕ್ರಿಯೆಯ ಬಹಳಷ್ಟು ಪ್ರಯೋಗ ಮತ್ತು ದೋಷವನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಉತ್ಪಾದಕ ಹೋರಾಟವು ವೈಫಲ್ಯಕ್ಕೆ ಮೃದುವಾದ ಪದವು ಸ್ಥಿತಿಸ್ಥಾಪಕತ್ವವನ್ನು ನಿರ್ಮಿಸುತ್ತದೆ, ಯಶಸ್ಸನ್ನು ತಲುಪಲು ಕಷ್ಟದ ಮೂಲಕ ತಳ್ಳಲು ಕಲಿಯುವವರಿಗೆ ಕಲಿಸುತ್ತದೆ.

- **ಕ್ರಿಯಾತ್ಮಕ ಬೋಧನೆಯ ತಲುಪಲು ಕಷ್ಟಪಡುವ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಪ್ರೇರೇಪಿಸಬಹುದು:** ಶೈಕ್ಷಣಿಕವಾಗಿ ಒಲವು ತೋರದ ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಸೃಜನಶೀಲತೆಯನ್ನು ವೈಯಕ್ತಿಕ ಆಸಕ್ತಿಯ ವಿಷಯವನ್ನು ಬಹಿರಂಗಪಡಿಸಲು ಅನುಮತಿಸಿದಾಗ, ರೂಪಾಂತರವು ಆಶ್ಚರ್ಯಕರವಾಗಿರುತ್ತದೆ. ಕೆಲವು ವಿದ್ಯಾರ್ಥಿಗಳು ಪರೀಕ್ಷೆಗಳಲ್ಲಿ ಉತ್ತಮವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುವುದಿಲ್ಲ ಅಥವಾ ಗ್ರೇಡ್–ವಾರು ಉತ್ತಮವಾಗಿ ಮಾಡುತ್ತಿಲ್ಲ, ಆದರೆ ಅವರು ಸೂಪರ್–ಕ್ರಿಯೇಟಿವ್ ಮಕ್ಕಳು.

- **ಕ್ರಿಯಾತ್ಮಕತೆಯ ಭವಿಷ್ಯದಲ್ಲಿ ಪ್ರಮುಖ ಉದ್ಯೋಗ ಕೌಶಲ್ಯವನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ:** ಕ್ರಿಯಾತ್ಮಕತೆ ಚಿಂತನೆಯಿಲ್ಲದೆ ನಾವು ಅಸ್ತಿತ್ವದಲ್ಲಿರಲು ಸಾಧ್ಯವಿಲ್ಲ. ಇದು ಕಲ್ಪನೆಯ ಉತ್ಪಾದನೆ ಮತ್ತು ಇತರರೊಂದಿಗೆ ಸಹಕರಿಸುವ ಅವಕಾಶವು ಕೆಲಸದ ಕಡೆಗೆ ಚಲಿಸುತ್ತದೆ.

- **ಸಮಸ್ಯೆಯನ್ನು ಪುನಃ ಹೇಳುವುದು:** ಶಿಕ್ಷಕರು ವಿಭಿನ್ನ ದೃಷ್ಟಿಕೋನಗಳಿಂದ ಯೋಚಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತಾರೆ, ಹೆಚ್ಚು ಬಹುಮುಖ ಪರಿಹಾರಗಳಿಗೆ ಕಾರಣವಾಗುತ್ತದೆ ಮತ್ತು ಇತರರಿಂದ ಅನನ್ಯ ದೃಷ್ಟಿಕೋನಗಳನ್ನು ಕೇಳಲು ಕಾರಣವಾಗುತ್ತದೆ.

- **ಸಮಸ್ಯೆಯನ್ನು ಊಹಿಸಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ:** ಸಮಸ್ಯೆಯ ಹೇಗೆ ಹುಟ್ಟಿಕೊಂಡಿರಬಹುದು ಎಂಬುದನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು ಕಲಿಯುವವರಿಗೆ ಅವು ಸಹಾಯ ಮಾಡುತ್ತವೆ ಮತ್ತು ಕಲಿಯುವವರಿಗೆ ಯಾವುದು ಸರಿ ಮತ್ತು ನಿಜವೆಂದು ಸ್ವತಃ ನಿರ್ಧರಿಸಲು ಕಲಿಸುತ್ತದೆ.

- **ಸಂಶೋಧನೆ ಮತ್ತು ಸತ್ಯಗಳನ್ನು ಸಂಗ್ರಹಿಸುವುದು:** ಉಪಯುಕ್ತ ತನಿಖೆ ಮತ್ತು ದತ್ತಾಂಶಗಳ ವಿಶ್ಲೇಷಣೆಯನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಅವಕಾಶಗಳನ್ನು ಒದಗಿಸುತ್ತದೆ ಮತ್ತು ಸಮಸ್ಯೆಗೆ ಪರಿಹಾರವನ್ನು ಕಂಡುಹಿಡಿಯುವುದು ಏಕೆ ಮುಖ್ಯ ಎಂದು ಯೋಚಿಸಲು ಕಲಿಯುವವರಿಗೆ ಸಮಯವನ್ನು ನೀಡುತ್ತದೆ.

ಶಿಕ್ಷಣದಲ್ಲಿ ಕ್ರಿಯಾತ್ಮಕ ಬೋಧನಾ ವಿಧಾನಗಳು:

➢ **ಸ್ಮಾರ್ಟ್ ಕ್ಲಾಸ್:** ಇಂದಿನ ದಿನಗಳಲ್ಲಿ, ಶಿಕ್ಷಕರು ಸ್ಮಾರ್ಟ್ ಬೋರ್ಡ್‌ಗಳಲ್ಲಿ ಪ್ರಸ್ತುತಿಗಳನ್ನು ನೀಡುವ ಮೂಲಕ, ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ನಿರ್ದಿಷ್ಟ ವಿಷಯಗಳ ಬಗ್ಗೆ ಆಸಕ್ತಿಯನ್ನು ಮೂಡಿಸಲು ಮಾಹಿತಿಯುಕ್ತ ವೀಡಿಯೋಗಳನ್ನು ತೋರಿಸುವುದರ ಮೂಲಕ ಬೋಧಿಸುವುದರಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳು ಬೋಧನಾ ಕಲಿಕಾ ಸಂಗತಿಗಳಲ್ಲಿ ಆಸಕ್ತಿಯನ್ನು ಮೂಡಿಸಿಕೊಳ್ಳುವುದರಲ್ಲಿ ಸಂಶಯವೇ ಇಲ್ಲ.

➢ **3D ಪ್ರಸ್ತುತಿ ವಿಧಾನ:** ಉನ್ನತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ 3D ಮುದ್ರಣ ಬೋಧನಾ ವಿಧಾನವು ಜಾಗತಿಕವಾಗಿ ಅತ್ಯಂತ ವೇಗದ ದರದಲ್ಲಿ ಸ್ವೀಕಾರವನ್ನು ಪಡೆಯುತ್ತಿದೆ. ಈ ವಿಧಾನದಲ್ಲಿ, ಕಲಿಕೆಯನ್ನು ಸುಲಭ ಮತ್ತು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಮಾಡಲು ಮೂಲ ಮಾದರಿಗಳನ್ನು ರಚಿಸಲು 3D ಮುದ್ರಕಗಳನ್ನು ಬಳಸಲಾಗುತ್ತದೆ.

➢ **ಕೋರ್ಸ್‌ಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ವೀಡಿಯೋ ಪ್ರಸ್ತುತೀಕರಣ:** ದೃಶ್ಯ ಕಲಿಕೆಯು ದೀರ್ಘಕಾಲ ಉಳಿಯುವ ಸ್ಮರಣೆಯನ್ನು ರಚಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ವೀಡಿಯೋಗಳು ಅಥವಾ ಸಂಬಂಧಿತ ದೃಶ್ಯ ವಿಷಯಗಳ ಮೂಲಕ ಕಲಿಸುವ ಪರಿಕಲ್ಪನೆಯು ಅದನ್ನು ಉತ್ತಮವಾಗಿ ಉಳಿಸಿಕೊಳ್ಳಲು ಸಹಾಯ ಮಾಡಿ ವಿಷಯ ದೀರ್ಘಕಾಲದವರೆಗೆ ನೆನಪಿನಲ್ಲಿರುವಂತೆ ಮಾಡುವುದರ ಮೂಲಕ ಮಕ್ಕಳಲ್ಲಿ ತಮಗೆ ಗೊತ್ತಿರುವ ಕ್ರಿಯಾತ್ಮಕ ಕಲಿಕೆಯನ್ನು ಉದ್ದೀಪನಗೊಳಿಸಲು ಸಹಾಯವಾಗುತ್ತದೆ.

➢ **ಕರಕುಶಲ ಮತ್ತು ಸೃಜನಶೀಲತೆ:** ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಜ್ಞಾನವನ್ನು ಸೃಜನಶೀಲತೆಯಲ್ಲಿ ಉತ್ತಮವಾಗಿ ಅನ್ವಯಿಸಬಹುದು. ಇದರಿಂದ ಸೃಜನಶೀಲತೆಯಿಂದ ಕಲಿಯಲು ಇದು ಪರಿಣಾಮಕಾರಿ ವಿಧಾನವಾಗಿದೆ. ಇದು ವಿಷಯ ಅಥವಾ ಕೋರ್ಸ್‌ಗೆ ಸಂಬಂಧಿಸಿದ ಕರಕುಶಲ ಕೆಲಸವನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ.

➢ **ಅನುಭವದ ಕಲಿಕೆ:** ಈ ಬೋಧನೆಯ ವಿಧಾನವು ಉತ್ತಮ ಪರಿಕಲ್ಪನೆಯ ನಿರ್ಮಾಣಕ್ಕಾಗಿ ಸುಲಭವಾಗಿ ನಿರ್ವಹಿಸಬಹುದಾದ ಚಟುವಟಿಕೆಗಳ ಪ್ರಯೋಗವನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಕೇವಲ ಪುಸ್ತಕದ ಜ್ಞಾನವನ್ನು ಹೇಳುವುದಕ್ಕಿಂತ ಪ್ರಯೋಗಗಳನ್ನು ಮಾಡುವುದು ಯಾವಾಗಲೂ ಉತ್ತಮವಾಗಿದೆ.

➢ **ಬಹುಸಾಕ್ಷರತೆಗಳು ಮತ್ತು ಗುಂಪು ಚರ್ಚೆಗಳು:** ಗುರುತನ್ನು ಶಾಶ್ವತವಾಗಿಸಲು ಗುಂಪು ಚರ್ಚೆಗಳು ಯಾವಾಗಲೂ ಉತ್ತಮ ಆಯ್ಕೆಯಾಗಿದೆ. ಇದು ಕೇವಲ ಹಿಂಜರಿಕೆಯನ್ನು ಕಡಿಮೆ ಮಾಡುತ್ತದೆ. ಆದರೆ ಇತರರ ಮುಂದೆ ಹೆಚ್ಚು ತಮ್ಮ ಅಭಿಪ್ರಾಯಗಳನ್ನು ವ್ಯಕ್ತಪಡಿಸುವಂತೆ ಮಾಡುತ್ತದೆ.

➢ **ಆಡಿಯೋ-ವೀಡಿಯೋ ಸಾಧನಗಳು:** ಕಲಿಯುವವರಿಗೆ ತ್ವರಿತವಾಗಿ ಕಲಿಯಲು ಸಹಾಯ ಮಾಡುವ ತಂತ್ರ. ಇದು ಕಿರುಚಿತ್ರಗಳು, ವೀಡಿಯೋಗಳು, ಮಾದರಿಗಳು, ಚಿತ್ರಗಳು, ಗ್ರಾಫಿಕ್ಸ್ ಮತ್ತು ಇತರ ಹಲವು ಮೆದುಳಿನ ಮ್ಯಾಪಿಂಗ್ ಸಾಧನಗಳ ರೂಪದಲ್ಲಿರಬಹುದು.

➢ **ಮೆದುಳುಪಟ್ಟುತ್ವ:** ಮೆದುಳಿನ ಸ್ನಾಯುಗಳನ್ನು ಬಲಪಡಿಸುವ ಮತ್ತು ಮೆದುಳನ್ನು ಹೆಚ್ಚು ಹೊಂದಿಕೊಳ್ಳುವ ಮೂಲಕ ಹೊಸ ಮತ್ತು ಸೃಜನಶೀಲ ವಿಚಾರಗಳ ಬಗ್ಗೆ ಯೋಚಿಸಲು ಕಲಿಯುವವರಿಗೆ ಸಹಾಯ ಮಾಡುವ ಉತ್ತಮ ಮತ್ತು ಅತ್ಯಂತ ಪರಿಣಾಮಕಾರಿ ಸಾಧನವಾಗಿದೆ.

➢ **ಸಂವಾದಾತ್ಮಕ ಪಾಠಗಳು:** ವಿದ್ಯಾರ್ಥಿಗಳು ನವೀನ ಕಲಿಯುವವರಾಗಿರಬೇಕು. ಏಕಮುಖ ಪಾಠಗಳು ತುಂಬಾ ಸಾಂಪ್ರದಾಯಿಕವಾಗಿವೆ, ಆದ್ದರಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಸ್ವಂತ ಆಲೋಚನೆಗಳನ್ನು ಮಾತನಾಡಲು ಮತ್ತು ವ್ಯಕ್ತಪಡಿಸಲು ಪ್ರೋತ್ಸಾಹಿಸುವ ವಾತಾವರಣವನ್ನು ರಚಿಸಲು ನಾವು ಪ್ರಯತ್ನಿಸುತ್ತೇವೆ.

➢ **ವರ್ಚುವಲ್ ರಿಯಾಲಿಟಿ ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸುವುದು:** ವರ್ಚುವಲ್ ರಿಯಾಲಿಟಿ ತಂತ್ರಜ್ಞಾನದೊಂದಿಗೆ ತರಗತಿಯೊಳಗೆ ಸಂಪೂರ್ಣ ಹೊಸ ಜಗತ್ತನ್ನು ನಮೂದಿಸಿ. 3D ಸಿನಿಮಾದಲ್ಲಿ ಕುಳಿತುಕೊಳ್ಳುವಂತೆ ಅಥವಾ ಗಿಖ ಆಟಗಳನ್ನು ಆಡುವಂತೆ, ವಿದ್ಯಾರ್ಥಿಗಳು ವಿವಿಧ ಸ್ಥಳಗಳಲ್ಲಿ ತಮ್ಮನ್ನು ತಾವು ತೊಡಗಿಸಿಕೊಳ್ಳಬಹುದು ಮತ್ತು 'ನೈಜ' ವಸ್ತುಗಳೊಂದಿಗೆ ಸಂವಹನ ನಡೆಸಬಹುದು.

➢ **ಸಂಯೋಜಿತ ಕಲಿಕೆ:** ಸಂಯೋಜಿತ ಕಲಿಕೆಯು ಸಾಂಪ್ರದಾಯಿಕ ಇನ್-ಕ್ಲಾಸ್ ತರಬೇತಿ ಮತ್ತು ನವೀನ ಆನ್‌ಲೈನ್ ಬೋಧನೆ ಎರಡನ್ನೂ ಸಂಯೋಜಿಸುವ ಒಂದು ವಿಧಾನವಾಗಿದೆ. ಇದು ಪರಿಣಾಮಕಾರಿ ಅಧ್ಯಯನ ಪರಿಸರವನ್ನು ರಚಿಸಲು ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಲಿಕೆಯ ಅನುಭವಗಳನ್ನು ನೀಡಲು ಹೆಚ್ಚು ನಮ್ಯತೆಯನ್ನು ನೀಡುತ್ತದೆ.

➢ **ಜಿಗ್ಸಾಗಳು:** ಇತರರಿಗೆ ಪರಿಕಲ್ಪನೆಯನ್ನು ಕಲಿಸುವ ಸಾಮರ್ಥ್ಯವು ನಿಜವಾದ ಪಾಂಡಿತ್ಯವನ್ನು ಯಶಸ್ವಿಯಾಗಿ ಪ್ರದರ್ಶಿಸುತ್ತದೆ ಎಂದು ಯಾವುದೇ ಶಿಕ್ಷಣತಜ್ಞರು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುತ್ತಾರೆ. ಜಿಗ್ಸಾಗಳು ಪ್ರಯತ್ನಿಸಿದ ಮತ್ತು ನಿಜವಾದ

ಸಹಕಾರಿ ಕಲಿಕೆಯ ತಂತ್ರವಾಗಿದ್ದು, ವಿದ್ಯಾರ್ಥಿಗಳು ಇತರ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕಲಿಸುವ ಮೂಲಕ ಈ ಕಲ್ಪನೆಯನ್ನು ಬಂಡವಾಳ ಮಾಡಿಕೊಳ್ಳುತ್ತಾರೆ.

➤ **QR ಕೋಡ್‌ಗಳು:** ಕಿಐ (ಕ್ವಿಕ್ ರೆಸ್ಪಾನ್ಸ್) ಕೋಡ್‌ಗಳನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಸರಳವಾಗಿದೆ ಮತ್ತು ಎಲ್ಲಾ ದರ್ಜೆಯ ಹಂತಗಳ ತರಗತಿ ಕೊಠಡಿಗಳಲ್ಲಿ ಹಲವಾರು ಅಪ್ಲಿಕೇಶನ್‌ಗಳನ್ನು ಹೊಂದಿರುತ್ತದೆ. ಡಿಜಿಟಲ್ ಸಾಧನದೊಂದಿಗೆ ಕೋಡ್ ಅನ್ನು ಸ್ಕ್ಯಾನ್ ಮಾಡುವ ಮೂಲಕ ಕಿಐ ಕೋಡ್‌ಗಳು ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಮಾಹಿತಿಗೆ ನಿರ್ದೇಶಿಸಬಹುದು.

➤ **ಹೊಂದಿಕೊಳ್ಳುವ ಕಲಿಕೆಯ ಪರಿಸರಗಳು:** ಶಿಕ್ಷಕರು ತಮ್ಮ ತರಗತಿಗಳನ್ನು ವಿವಿಧ ಸೂಚನಾ ವಿಧಾನಗಳಿಗಾಗಿ ಹೇಗೆ ಬಳಸಬೇಕೆಂದು ತಿಳಿದಿರಬೇಕು. ಉದಾಹರಣೆಗೆ, ಶಿಕ್ಷಕರು ತರಗತಿಯಲ್ಲಿ ಪೀಠೋಪಕರಣಗಳನ್ನು ಬದಲಾಯಿಸಲು ಸಿದ್ಧರಿದ್ದರೆ, ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಯನ್ನು ಹೆಚ್ಚಿಸಲು ಇದು ನಿರ್ಣಾಯಕ ವೇರಿಯಬಲ್ ಎಂದು ಅವರು ಕಂಡುಕೊಳ್ಳಬಹುದು.

ಬೋಧನಾ ಕಲಿಕಾ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಸಕ್ರಿಯವಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ತೊಡಗಿಸಿಕೊಳ್ಳಲು ಕ್ರಿಯಾತ್ಮಕ ಮಾರ್ಗಗಳು:

❖ **ಸಂಕ್ರಿಯಾತ್ಮಕ ಊಹೆಗಳು:** ಯಾರಾದರೂ ಪ್ರಸ್ತುತ ಚಿಂತನೆಯ ಮಾದರಿಗಳಲ್ಲಿ ಆಲೋಚನೆಗಳು ಖಾಲಿಯಾದಾಗ ಊಹೆಯ ಬಸ್ಟಿಂಗ್ ಹೆಚ್ಚು ಪರಿಣಾಮಕಾರಿಯಾಗಿದೆ.

❖ **ಬ್ರೈನ್‌–ಸ್ಕೆಚಿಂಗ್:** ನಿರ್ದಿಷ್ಟ ಸಮಸ್ಯೆಯನ್ನು ಪರಿಹರಿಸಲು, ಕಲಿಯುವವರು ರೇಖಾಚಿತ್ರಗಳನ್ನು ಮಾಡುತ್ತಾರೆ ಮತ್ತು ನಂತರ ತಮ್ಮ ನೆರೆಹೊರೆಯವರಿಗೆ ವಿಕಸನಗೊಳ್ಳುತ್ತಿರುವ ರೇಖಾಚಿತ್ರಗಳನ್ನು ರವಾನಿಸುತ್ತಾರೆ.

❖ **ಕಾನ್ಸೆಪ್ಟ್ ಮ್ಯಾಪಿಂಗ್:** ಕಾನ್ಸೆಪ್ಟ್ ಮ್ಯಾಪಿಂಗ್ ಜ್ಞಾನವನ್ನು ಗ್ರಾಫಿಕ್ ರೂಪದಲ್ಲಿ ಹೇಳುತ್ತದೆ. ನೆಟ್‌ವರ್ಕ್‌ಗಳು ನೋಡ್‌ಗಳನ್ನು ಒಳಗೊಂಡಿರುತ್ತವೆ, ಇದು ಪರಿಕಲ್ಪನೆಗಳು ಮತ್ತು ಲಿಂಕ್‌ಗಳನ್ನು ಪ್ರತಿನಿಧಿಸುತ್ತದೆ, ಇದು ಪರಿಕಲ್ಪನೆಗಳ ನಡುವಿನ ಸಂಬಂಧಗಳನ್ನು ಪ್ರತಿನಿಧಿಸುತ್ತದೆ.

❖ **ಉತ್ತೇಕ್ಷೆ:** ಈ ವಿಧಾನವು ಪರಿಹಾರಗಳಿಗಾಗಿ ಕಲ್ಪನೆಗಳನ್ನು ನಿರ್ಮಿಸಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ. ಅದರ ಪ್ರಮಾಣದ ಬಗ್ಗೆ ಮಾತನಾಡದ ಮುನ್ನೋಟಗಳನ್ನು ಪರೀಕ್ಷಿಸುವ ಮೂಲಕ ಸಮಸ್ಯೆಯನ್ನು ವಿವರಿಸಲು ಇದು ಉಪಯುಕ್ತವಾಗಿದೆ.

❖ **ಫಿಶ್‌ಬೋನ್:** ಫಿಶ್‌ಬೋನ್ ತಂತ್ರವು ಸಮಸ್ಯೆಯ ಸಂಭವನೀಯ ಕಾರಣಗಳನ್ನು ಕಂಡುಹಿಡಿಯಲು ದೃಶ್ಯ ಸಂಘಟಕವನ್ನು ಬಳಸುತ್ತದೆ. ಈ ತಂತ್ರವು ಭಾಗಶಃ ಪರಿಹಾರಗಳನ್ನು ನಿರುತ್ಸಾಹಗೊಳಿಸುತ್ತದೆ ಮತ್ತು ಸಮಸ್ಯೆಗಳ ವಿವಿಧ ಭಾಗಗಳ ನಡುವಿನ ಸಾಪೇಕ್ಷ ಪ್ರಾಮುಖ್ಯತೆ ಮತ್ತು ಪರಸ್ಪರ ಕ್ರಿಯೆಯನ್ನು ಪ್ರದರ್ಶಿಸುತ್ತದೆ.

❖ **ಪ್ರಶ್ನಿಸುವ ವಿಧಾನ:** ಈ ವಿಧಾನವು ಸರಳವಾಗಿ ಯಾರನ್ನು ಕೇಳುತ್ತದೆ? ಏನು? ಯಾವಾಗ? ಎಲ್ಲಿ? ಏಕೆ? ಮತ್ತು ಹೇಗೆ? ಸಮಸ್ಯೆಯನ್ನು ಪರಿಹರಿಸುವಾಗ ಅಥವಾ ನಿರ್ಧಾರ ತೆಗೆದುಕೊಳ್ಳುವಾಗ.

❖ **ಲ್ಯಾಡರಿಂಗ್:** ಲ್ಯಾಡರಿಂಗ್ ವಿಧಾನವು ಕಲ್ಪನೆಗಳನ್ನು ರಚಿಸಲು ಎರಡು ಅಮೂರ್ತೆಗಳ ನಡುವೆ ಟಾಗಲ್ ಮಾಡುವುದನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಏಣಿಯ ತಂತ್ರಗಳು ಶ್ರೇಣೀಕೃತ ಜ್ಞಾನದ ರಚನೆ, ವಿಮರ್ಶೆ ಮತ್ತು ಮಾರ್ಪಾಡುಗಳನ್ನು ಒಳಗೊಂಡಿರುತ್ತವೆ.

❖ **ಋಣಾತ್ಮಕ ಮೆದುಳುಪಟುತ್ವ:** ಋಣಾತ್ಮಕ ಮಿದುಳುದಾಳಿಯು ಸಾಂಪ್ರದಾಯಿಕ ಮಿದುಳುದಾಳಿಯಂತೆ ಕಲ್ಪನೆಗಳ ಆರಂಭಿಕ ಸಮೂಹಕ್ಕಿಂತ ಹೆಚ್ಚಾಗಿ ಅಸ್ತಿತ್ವದಲ್ಲಿರುವ ಆಲೋಚನೆಗಳ ಕಿರು ಪಟ್ಟಿಯನ್ನು ವಿಶ್ಲೇಷಿಸುವುದನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ. ಸಂಭಾವ್ಯ ವೈಫಲ್ಯಗಳನ್ನು ಪರಿಶೀಲಿಸುವುದು ಕಲ್ಪನೆಯು ಹೊಸ ಅಥವಾ ಸಂಕೀರ್ಣವಾದಾಗ ಅಥವಾ ದೋಷಕ್ಕೆ ಕಡಿಮೆ ಅಂಚು ಇರುವಾಗ ಪ್ರಸ್ತುತವಾಗಿದೆ.

❖ **ಪೋಸ್ಟ್‌–ಅಪ್:** ಪೋಸ್ಟ್‌–ಅಪ್ ದೊಡ್ಡ ಗುಂಪುಗಳಿಂದ ಆಲೋಚನೆಗಳನ್ನು ಸಂಗ್ರಹಿಸಬಹುದು, ಡಜನ್‌ಗಳಿಂದ ನೂರಾರು ಸಂಖ್ಯೆಗಳವರೆಗೆ. ಭಾಗವಹಿಸುವವರಿಗೆ ಕಾಗದದ ಚೀಟಿಗಳನ್ನು ನೀಡಲಾಗುತ್ತದೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ಮಾಡಲಾದ ಆಲೋಚನೆಗಳನ್ನು ಬರೆಯಲು ಕೇಳಲಾಗುತ್ತದೆ.

❖ **ಸ್ಟೋರಿ ಬೋರ್ಡಿಂಗ್:** ಸ್ಟೋರಿ ಬೋರ್ಡಿಂಗ್ ಅನ್ನು ಅವರು ಪ್ರಾಜೆಕ್ಟ್‌ನಲ್ಲಿ ಕೆಲಸ ಮಾಡುವಾಗ ಅಥವಾ ಸಮಸ್ಯೆಯನ್ನು ಪರಿಹರಿಸುವಾಗ ಕಲಿಯುವವರ ಆಲೋಚನೆಗಳನ್ನು ಗೋಡೆಯ ಮೇಲೆ ಹರಡುವುದಕ್ಕೆ ಹೋಲಿಸಬಹುದು.

ಉಪಸಂಹಾರ :

ತರಗತಿಯಲ್ಲಿ, ಶಿಕ್ಷಕರಿಗೆ ವಿದ್ಯಾರ್ಥಿಗಳ ತೊಡಗಿಸುವಿಕೆ, ತರಗತಿಯ ನಿರ್ವಹಣೆ ಮತ್ತು ಸೂಚನಾ ತಂತ್ರಗಳನ್ನು ನಿರ್ವಹಿಸುವಂತಹ ಹಲವಾರು ಜವಾಬ್ದಾರಿಗಳಿವೆ. ಸೃಜನಶೀಲ ಬೋಧನಾ ವಿಧಾನಗಳ ಮೂಲಕ ಕಲಿಕೆಯನ್ನು ಸುಗಮಗೊಳಿಸಬಹುದು ಮತ್ತು ಸುಧಾರಿಸಬಹುದು. ಶಿಕ್ಷಕರು ತಮ್ಮ ವಿದ್ಯಾರ್ಥಿಗಳ ಅಗತ್ಯತೆಗಳ ಆಧಾರದ ಮೇಲೆ ತಮ್ಮ ವಿಧಾನ ಮತ್ತು ವಿಧಾನವನ್ನು ಸರಿಹೊಂದಿಸಬೇಕು. ತರಗತಿಯಲ್ಲಿ ಕಲಿಕೆಯ ಯಶಸ್ಸು ಬೋಧನಾ ವಿಧಾನದ ಆಯ್ಕೆಯ ಮೇಲೆ ಅವಲಂಬಿತವಾಗಿರುತ್ತದೆ. ತರಗತಿಯಲ್ಲಿ ನವೀನ ಬೋಧನಾ ತಂತ್ರಗಳನ್ನು ಬಳಸುವುದರಿಂದ ಕಲಿಕೆಯನ್ನು ಸುಲಭ ಮತ್ತು ಹೆಚ್ಚು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಮಾಡಬಹುದು.

ತರಗತಿಯಲ್ಲಿ ವೈವಿಧ್ಯಮಯ ಕಾರ್ಯತಂತ್ರಗಳ ಪ್ರಯೋಗವು ವಿದ್ಯಾರ್ಥಿಗಳ ಬೆಳವಣಿಗೆಯನ್ನು ಉತ್ತೇಜಿಸಲು ಕಲಿಕೆಯನ್ನು ಉತ್ತೇಜಿಸಲು ಶಿಕ್ಷಕರಿಗೆ ಸಹಾಯ ಮಾಡುವ ಪುನರಾವರ್ತಿತ ಪ್ರಕ್ರಿಯೆಯಾಗಿದೆ. ನಿರಂತರವಾಗಿ ಬದಲಾಗುತ್ತಿರುವ ಪರಿಸರದೊಂದಿಗೆ, ಹೊಸ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸಲು ಎಲ್ಲವೂ ನವೀಕರಿಸಲ್ಪಟ್ಟಿದೆ ಮತ್ತು ನವೀನವಾಗಿದೆ. ತರಗತಿಯನ್ನು ಲ್ಯಾಪ್‌ಟಾಪ್ ಅಥವಾ ನಿಮ್ಮ ಸ್ಮಾರ್ಟ್‌ಫೋನ್‌ನಿಂದ ಬದಲಾಯಿಸಲಾಗಿದೆ, ಸೀಮೆಸುಣ್ಣವನ್ನು ಲೈಟ್ ಪೆನ್‌ನಿಂದ ಬದಲಾಯಿಸಲಾಗಿದೆ. ಹೌದು, ಇದೆಲ್ಲವೂ ಆನ್‌ಲೈನ್ ಬೋಧನಾ ವ್ಯವಸ್ಥೆಯ ಬಗ್ಗೆ. ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಪ್ರತಿ ವರ್ಷವೂ ಹೆಚ್ಚು ನವೀಕರಣಗೊಳ್ಳುತ್ತಿದೆ. ಹೊಸ ಶಿಕ್ಷಣ ಜಗತ್ತಿನಲ್ಲಿ ವ್ಯಾಪಕವಾದ ಆವಿಷ್ಕಾರಗಳು ಹೊರಹೊಮ್ಮುತ್ತಿವೆ.

ಬದಲಾಗುತ್ತಿರುವ ಜಗತ್ತಿನಲ್ಲಿ ಯಂತ್ರಗಳು ಬೋಧನಾ ವಿಭಾಗಕ್ಕೆ ಹೆಚ್ಚು ಸ್ಪರ್ಧೆಯನ್ನು ನೀಡುವ ಜಗತ್ತಿನಲ್ಲಿ ಸೃಜಾತ್ಮಕ. ಕ್ರಿಯಾತ್ಮಕ ಬೋಧನೆಯ ಮೂಲಕ ಶಿಕ್ಷಕ ತನ್ನ ಶಿಕ್ಷಣದ ಶೈಲಿಯನ್ನು ತಾನು ಕಲಿತು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಿಳಿಸಿಕೊಡುವ ಅನಿವಾರ್ಯತೆಯಲ್ಲಿ ಶಿಕ್ಷಕ ವರ್ಗವಿದೆ ಎಂದರೆ ತಪ್ಪಾಗಲಾರದು. ಶಿಕ್ಷಕ ಹೇಳುವ ಸಂಗತಿಯನ್ನು ಇಂದು ಯಂತ್ರಗಳು, ಕೃತಕ ಬುದ್ಧಿಮತ್ತೆ ಇಂದು ಕೇವಲ ಸೆಕೆಂಡುಗಳಲ್ಲಿ ಒದಗಿಸುವ ಈ ಸಂದರ್ಭದಲ್ಲಿ ಶಿಕ್ಷಕ ಬದಲಾಗಬೇಕಾಗಿದೆ. ನಾವೇ ಕಂಡುಹಿಡಿದ ಯಂತ್ರಗಳು ಇಂದು ನಮ್ಮನ್ನು ಆಳುವ ದಿನಗಳು ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಅತ್ಯಂತ ಹೆಚ್ಚಾಗುವ ಕ್ಷಣಗಳು ಬರುತ್ತಿವೆ. ಆದ್ದರಿಂದ, ಶಿಕ್ಷಕ ವಿದ್ಯಾರ್ಥಿಗಳ ಅವಿನಾಭಾವ ಸಂಬಂಧಗಳನ್ನು ಉಳಿಸಿ ಬೆಳಸಲು ನಾವೆಲ್ಲ ಶ್ರಮವಹಿಸಿ ಬೋಧಿಸೋಣ.

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ಕಾರಂತರು ಮತ್ತು ಗಾಂಧಿ ಶೈಕ್ಷಣಿಕ ಚಿಂತನೆಗಳು

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ಪ್ರಿಮೋ ಲೆವಿಯ ಒಂದು ಮಾತನ್ನು ಹಿದೇನ್ ಉಲ್ಲೇಖಿಸುತ್ತಾನೆ: ವಾಸ್ತವದ ಚಿತ್ರಗಳು ಎಂದರೆ ಸಾಹಿತ್ಯದ ನಿಜವಾದ ಸಾಕ್ಷ್ಯದ ರೂಪಗಳು. ಎಷ್ಟೋ ಕಥನಗಳು ನಮ್ಮ ಜೀವನದ ಅತ್ಯಂತ ಕಡು ಕಷ್ಟಗಳನ್ನು ಹೇಳುತ್ತವೆ. ಲೆವಿಯು ಹೇಳುವಂತೆ ಒಂದು ಭಾವನೆ, ಒಂದು ಘಟನೆ, ಒಂದು ಸಂಗತಿ, ಒಂದು ಮೌಲ್ಯವನ್ನು ಅದು ಹೇಳುತ್ತದೆ. ಸಾಹಿತ್ಯವು ಅದನ್ನು ಸೆರೆ ಹಿಡಿಯುತ್ತದೆ. ಆದರೆ ಅದರಲ್ಲಿ ನಮ್ಮ ವೈಯಕ್ತಿಗೆ ಹೆಚ್ಚು ಅವಕಾಶವಿಲ್ಲ. ವಾಸ್ತವತೆಯಲ್ಲಿ ಇರುವುದು ಸಾಧ್ಯವಿಲ್ಲ. ನಾವು ಬಳಸುವ ಪದಗಳಿಗೂ ನಿಜವಾದ ಘಟನೆಗೂ ಒಂದು ಸಂಬಂಧವು ಇರುತ್ತದೆ. ಘಟನೆಯನ್ನು ನಾವು ಬಳಸುವ ಪದಗಳು ವ್ಯಾಖ್ಯಾನ ಮಾಡುತ್ತವೆ. ಅದಕ್ಕೆ ಒಂದು ಉದ್ದೇಶವೂ ಇರುತ್ತದೆ. ಪದವು ಅರ್ಥ ಪೂರ್ಣವಾಗುವುದು ಅದರ ವ್ಯಾಖ್ಯೆಯಲ್ಲಿ ಎನ್ನುವುದು ನಿಜ. ಹಿದೇನ್ ಪ್ರಾಕ್ಟಿಕಲ್ ಪಾಸ್ಟ್ ಕೃತಿಯಲ್ಲಿ ಒಂದು ಮಾತನ್ನು ಹೇಳುತ್ತಾನೆ. –ನಮ್ಮ ಭೂತಕಾಲ ಎನ್ನುವುದು ನಮ್ಮ ಅನುಭವಗಳ ಪ್ರಾಕ್ತನರೂಪ. ಅದು ಅನುಭವ ಮತ್ತು ಅದರ ಅವಕಾಶವನ್ನು ಹೇಳುತ್ತದೆ. ಮತ್ತೆ ಕೇಳಬೇಕಾದ ಪ್ರಶ್ನೆಯೆಂದರೆ ನಾವು ಈಗ ಯಾವುದನ್ನು ಮಾಡಬೇಕಾಗಿದೆ. ? ನಮ್ಮ ಸಾಧ್ಯತೆಗಳು ಏನು? ನಾವು ಯಾವುದನ್ನು ಅಂಗೀಕಾರ ಮಾಡುತ್ತಿದ್ದೇವೆ ಮತ್ತು ಅದರ ಹಿಂದೆ ಇರುವ ನೀತಿಯು ನಮ್ಮನ್ನು ಆಳುತ್ತದೆ ಎಂದು ಕಾಂಟ್ ಕೇಳುತ್ತಾನೆ. ನೈತಿಕ ನಡವಳಿಕೆಯಲ್ಲಿ ಈಗತ್ತು ಯಾವುದು ಇದೆ ಎಂದು ನೋಡಿದರೆ ನಮಗೆ ಇದು ಗೊತ್ತಾಗುತ್ತದೆ. ನೆನಪುಗಳು, ಅನುಭವಗಳು, ಕಲ್ಪನೆಗಳು ಮತ್ತು ಕನಸುಗಾರಿಕೆಗಳು ನಮ್ಮ ಸಾಹಿತ್ಯದಲ್ಲಿ ಇದೆ. ನಾವು ಅದನ್ನು ಸಂಯೋಜನೆ ಮಾಡುತ್ತೇವೆ. ಕಾಲ ಮತ್ತು ಅವಕಾಶಗಳೂ ಇದರ ಜೊತೆಗೆ ಇರುತ್ತವೆ. ಆದ್ದರಿಂದ ನಾವು ಸಾಹಿತ್ಯದ ಮೂಲಕ ಇದನ್ನು ಪಡೆಯುತ್ತೇವೆ. ಅದಕ್ಕೆ ಒಂದು ಪ್ರಾಯೋಗಿಕ ಎನ್ನಬಹುದಾದ ಗುಣವೂ ಇರುತ್ತದೆ. ಚರಿತ್ರೆಯ ಕುರಿತು ಬರೆಯುವುದು ಎಂದರೆ ಒಂದು ಸಮಾಜದ ವಾಸ್ತವವನ್ನು ಬರೆಯುವುದು ಎಂದು ಅರ್ಥ. ಅದರಲ್ಲಿ ಚಾರಿತ್ರಿಕವಾದ ಆಶಯವು ಇರುತ್ತದೆ. ಚರಿತ್ರೆಯನ್ನು ಹೇಳಲು ನಮಗೆ ವಾಸ್ತವವಾದಿ ನಿರೂಪಣೆಯ ಒಂದು ಪರಿಕರವು ಮಾತ್ರ. ಅದರ ಮೂಲಕ ನಾವು ಚರಿತ್ರೆಯನ್ನು ಮತ್ತೆ ಕಟ್ಟುತ್ತೇವೆ. ಅದು ಕಥನದ ಪುನರ್ ನಿರ್ಮಾಣವೂ ಹೌದು.

ಚರಿತ್ರೆ ಎನ್ನುವುದು ಕಳೆದು ಹೋದುದರ ಮರು ಪರಿಶೀಲನೆಯೂ ಹೌದು. ಇಲ್ಲಿ ಮರುಪರಿಶೀಲನೆ ಎನ್ನುವುದು ನ್ಯಾಯಬದ್ಧವಾಗಿರುತ್ತದೆ. ಅದರ ಜೊತೆಗೆ ಅದು ಶೈಕ್ಷಣಿಕವಾಗಿರುತ್ತದೆ. ಅದು ಅತ್ಯಂತ ಸಹಜವೂ ಆಗಿರುತ್ತದೆ. ಚರಿತ್ರೆಯನ್ನು ಇಂಗ್ಲಿಷಿನಲ್ಲಿ ಹಿಸ್ಟರಿ ಎಂದು ಕರೆಯುತ್ತೇವೆ. ಮೂಲ ಪದ ಗ್ರೀಕಿನದು. ಹಿಸ್ಟಾರಿಯಾ ಎಂದು ಗ್ರೀಕಿನಲ್ಲಿ ಬಳಸುತ್ತಾರೆ. ಹಾಗೆಂದರೆ ಪರಿಶೀಲನೆ ಮಾಡು ಎಂದು ಅರ್ಥ. ಸಂಶೋಧನೆಯ ಮೂಲಕ ಯಾವುದನ್ನು ನಾವು ಕಂಡುಕೊಳ್ಳುತ್ತೇವೆಯೋ ಅದು ಹಿಸ್ಟ್ರಿ ಆಗುತ್ತದೆ. ಜರ್ಮನಿಯ ಅತ್ಯಂತ ಸುಪ್ರಸಿದ್ಧ ಚರಿತ್ರೆಕಾರನು ಒಂದು ಮಾತನ್ನು ಹೇಳುತ್ತಾನೆ: " ನಿಜವಾಗಿಯೂ ಆಗಿರುವುದು ಏನು?" ಅವನು ವಾಸ್ತವಕ್ಕೆ ಹೆಚ್ಚಿನ ಮಹತ್ವವನ್ನು ಕೊಡುತ್ತಾನೆ. ಇದೇ ಪ್ರಶ್ನೆ ಈ ಕಾವ್ಯದಲ್ಲಿದೆ. ಆಧುನಿಕ ಜಾತ್ಯಾತೀತವಾದ , ವೈಜ್ಞಾನಿಕ ಮನೋಸ್ಥಿತಿಯು ಹೇಗೆ ಕೆಲಸವನ್ನು ಮಾಡುತ್ತದೆ ಎನ್ನುವುದನ್ನು ನಾವು ಅವನ ಬರಹಗಳಲ್ಲಿ ಕಾಣಬಹುದು ಎಂದು ವಿಮರ್ಶಕರು ಅಭಿಪ್ರಾಯಪಡುತ್ತಾರೆ. ಅವನ ವಿಶಿಷ್ಟತೆಯೆಂದರೆ ಇತಿಹಾಸವನ್ನು ಅವನು ತತ್ವಜ್ಞಾನದ ಬೆಳಕಿನಲ್ಲಿ ನೋಡಿರುವುದು. ಚರಿತ್ರೆಯು ಮಾತ್ರವೇ ಸತ್ಯವನ್ನು ಹೇಳುತ್ತದೆ ಎಂಬ ವಾದವನ್ನು ಅವನು ನಿರಾಕರಿಸುತ್ತಾನೆ. ಚರಿತ್ರೆಯ ಅಧ್ಯಯನಕ್ಕೆ ವಾಸ್ತವವಾಗಿ ವಿಜ್ಞಾನದ ಬೆಂಬಲವು ಬೇಕು ಎನ್ನುವುದು ಅವನ ನಿಲುವು. ನಾವು ಯಾವುದನ್ನೂ ಪರೀಕ್ಷೆ ಮಾಡದೆ ಒಂದು ನಿಲುವಿಗೆ ಬರಲ ಸಾಧ್ಯವಿಲ್ಲ. ಒಂದು ದೃಷ್ಟಿಕೋನದಿಂದ ನಾವು ಚರಿತ್ರೆಯನ್ನು ನಿರ್ಧಾರಮಾಡಲು ಸಾಧ್ಯವಿಲ್ಲ. ಚರಿತ್ರೆಯಲ್ಲಿ ಒಂದು ಘಟನೆ ಮತ್ತು ಒಂದು ನಿರ್ಣಯ ಎನ್ನುವುದು ಇರಲು ಸಾಧ್ಯವಿಲ್ಲ. ಒಂದು ಕಥನಕ್ಕೆ ಹೇಗೆ ಹಲವು ಸಾಧ್ಯತೆಗಳು ಇರುತ್ತವೆಯೋ ಅದೇ ರೀತಿಯಲ್ಲಿ ಒಂದು ಚಾರಿತ್ರಿಕ ಸಂಗತಿಯಲ್ಲಿ ಅನೇಕ ವಾದ ವಿವಾದಗಳು ಇರುತ್ತವೆ.

ಮನೆಯನ್ನು ಕಟ್ಟುವುದರಿಂದ ಶುರುಮಾಡಿ ಮದುವೆಯ ವರೆಗೆ ಧರ್ಮವು ಇರುತ್ತದೆ. ಆದ್ದರಿಂದ ಇದು ಸಾರ್ವಜನಿಕವಾದ ಸಂಗತಿಯನ್ನು ಹೇಳುತ್ತದೆ. ಅದರ ಜೊತೆಗೆ ಒಂದು ಪರಂಪರೆಯನ್ನು ಕಟ್ಟಿಕೊಡುತ್ತದೆ. ಕೆಲವು ಸಂಪ್ರದಾಯಗಳು ಯಾವಾಗ ಹುಟ್ಟಿದವು ಮತ್ತು ಅದರ ಅರ್ಥಗಳು ಏನು ಎನ್ನುವುದು ನಮಗೆ ಈಗಲೂ ತಿಳಿದಿಲ್ಲ. ಅವುಗಳು ಸಾಮಾಜಿಕ ವರ್ತನೆಯ ಒಂದು ಭಾಗವೂ ಹೌದು. ಕೆಲವು ಸಾಂಸ್ಕೃತಿಕ ಕಾರ್ಯಕ್ರಮಗಳ ಭಾಗವೂ ನಿಜ. ಅದನ್ನು ಆ ಫರ ರೂಪಿಸಲಾಗುತ್ತಿದೆ. ಅದನ್ನು ಗುಣ ಮತ್ತು ನಡೆಯ ಭಾಗ ಎಂದು ತಿಳಿಯುತ್ತೇವೆ. ಕೆಲವನ್ನು ನಾವು ಸಾಂಸ್ಕೃತಿಕವಾಗಿ ರೂಪಿಸಿಕೊಂಡಿದ್ದೇವೆ. ಕೆಲವು ಅಂಶಗಳನ್ನು ನಾವು ಈವತ್ತು ಜೈವಿಕ ಅಂಶಗಳು ಎಂದು ಹೇಳುತ್ತೇವೆ. ಮತ್ತೆ ಕೆಲವು ಸಂಗತಿಗಳನ್ನು ಸಾಂಕೇತಿಕ ಎಂದು ಭಾವಿಸುತ್ತೇವೆ. ಸಂಸ್ಕೃತಿಯಲ್ಲಿ ಕೆಲವು ಮಾದರಿಗಳ ನಿರ್ಮಾಣವಾಗುತ್ತದೆ.. ಕೆಲವು ಸಾಂಕೇತಿಕ ಮತ್ತೆ ಕೆಲವು ಸಾಂಕೇತಿಕವಾಗದೇ ಇರುವಂಥದ್ದು. ಸಂಸ್ಕೃತಿಯಲ್ಲಿ ಕೆಲವು ಸಂಗತಿಗಳು ಸಮಾನಾಂತರವಾದ ರೇಖೆಗಳ ಫರ ಮುಂದುವರಿಯುತ್ತವೆ. ಮತ್ತೆ ಕೆಲವು ಸಂವೇದನೆಗೆ ತಟ್ಟುತ್ತವೆ. ಮತ್ತೆ ಕೆಲವು ನಮ್ಮ ಸಂವೇದನೆಗೆ ತಟ್ಟುವುದೇ ಇಲ್ಲ. ಕೆಲವು ವಾಸ್ತವ. ಮತ್ತೆ ಕೆಲವು ಅವಾಸ್ತವ. ಬಲಿಯನ್ನು ಕೊಡುವುದು ಆಚರಣೆ. ಹಿಟ್ಟಿನ ಹುಂಜ ಇದನ್ನು ಹೇಳುತ್ತದೆ. ಹರಿದು ಹೋಗುತ್ತಿರುವ ನೀರನ್ನು ಅಣೆಕಟ್ಟಿನಲ್ಲಿ ಕಟ್ಟಿ ನಿಲ್ಲಿಸುವುದು ವಾಸ್ತವ. ನಮಗೆ ಅದು ತಿಳಿಯುತ್ತದೆ. ಇದು ನಮಗೆ ಕೆಲವು ವಿವರಣೆಗಳನ್ನು ಕೊಡುತ್ತವೆ. (ಕೆ. ಕ್ರಾಕ್ 1952 ದ ನೇಚರ್ ಆಫ್ ಎಕ್ಸ್ಪ್ಲನೇಶನ್)

ಹಾಗೆ ನೋಡಿದರೆ ಸಂಸ್ಕೃತಿ ಎನ್ನುವ ಪದಕ್ಕೆ ಏಕಾರ್ಥವಿಲ್ಲ. ಅದು ಬದಲಾಗುತ್ತದೆ. ಸ್ಥಳ ಮತ್ತು ಕಾಲವನ್ನು ಅನುಸರಿಸಿಕೊಂಡು ವ್ಯತ್ಯಾಸವಾಗುತ್ತದೆ. ಸಂಸ್ಕೃತಿ ಎನ್ನುವುದು ಒಟ್ಟಾರೆಯಾದ ಜನರ ಜೀವನ ವಿಧಾನವಾಗಿದೆ. ಆದ್ದರಿಂದ ಜೈನರದ್ದು ಒಂದು ಗುಂಪು. ಜನ್ನ ಆ ಪರಂಪರೆಯಿಂದ ಬಂದವನು. ಸಂಸ್ಕೃತಿ ಎನ್ನುವುದು ಒಂದು ವಿವರಣೆಯೂ ಹೌದು. ಅದು ಸಾರ್ವ ಜನಿಕವಾಗಿದೆ. ಅದರ ಜೊತೆಗೆ ಅದನ್ನು ಸ್ವೀಕಾರ ಮಾಡಿದವರು ಒಂದು ಬಗೆಯ ಜೀವನವನ್ನು ನಡೆಸುತ್ತಾರೆ. ಮಾನವ ಸಮಾಜದ ಅತ್ಯಂತ ಮುಖ್ಯವಾದ ಓದು ಕ್ರಿಯೆ ಎಂದರೆ ಸಂಸ್ಕೃತಿಯನ್ನು ಮುಂದುವರಿಸುವುದು. ಜೀವನದ ವಿಧಾನಗಳನ್ನು ಅರ್ಥ ಮಾಡಿಕೊಳ್ಳಲಿಕ್ಕೆ ಇದು ಉಪಯೋಗವಾಗುತ್ತದೆ ಎಂದು ರೆಮಾಂಡ್ ವಿಲಿಯಂಸ್ ಹೇಳುತ್ತಾನೆ. ಮಾನವ ಮನಸ್ಸು ಒಂದು ವಿಶಿಷ್ಟವಾದ ಸಂಯೋಜನೆಯನ್ನು ನಾವು ಸಂಸ್ಕೃತಿಯಲ್ಲಿ ಕಾಣುತ್ತೇವೆ. ಅದರಲ್ಲಿ ಸಾಮಾನ್ಯವಾದ ಅರ್ಥವಿದೆ ಎನ್ನುವುದು ಎಷ್ಟು ಸತ್ಯವೋ ಅದೇ ರೀತಿಯಲ್ಲಿ ವೈಯಕ್ತಿಕವಾದ ಅರ್ಥವೂ ಇದೆ ಎನ್ನುವುದು ಅವನ ವಾದ. ಅದರ ಜೊತೆಗೆ ಅನ್ವೇಷಣೆ ಮತ್ತು ಸೃಜನಶೀಲತೆಯ ಇರುತ್ತದೆ. ಪ್ರತಿ ಮಬಸ್ಸನಲ್ಲಿ ಮತ್ತು ಪ್ರತಿಸಮಾಜದಲ್ಲಿ ಸಂಸ್ಕೃತಿಯ ಅತ್ಯಂತ ಸಾಮಾನ್ಯವಾದ ಅಂಶವು ಆಗಿದೆ. ಅನೇಕ ವಿಭಿನ್ನವಾದ ಸಿದ್ಧಾಂತಗಳು ಧರ್ಮವನ್ನು ಕುರಿತು ಚರ್ಚೆಯನ್ನು ಮಾಡಿವೆ. ಹತ್ತೊಂಬತ್ತನೆಯ ಶತಮಾನದಲ್ಲಿ ಇದರ ಚರ್ಚೆಯ ಬೇರೆ ಬೇರೆ ರೂಪಗಳನ್ನು ಪಡೆಯಿತು. ಧರ್ಮವನ್ನು ಒಂದು ನಂಬಿಕೆಯಾಗಿ ನೋಡಿದ್ದು ಹೆಚ್ಚು. ಅದು ಸಾಮಾಜಿಕ ಉತ್ಪನ್ನವೂ ಹೌದು. ದೈನಂದಿನ ಸಮಸ್ಯೆಗಳನ್ನು ಬಗೆ ಹರಿಸುವಲ್ಲಿ ಅದರ ಪಾತ್ರವು ಅತ್ಯಂತ ಮುಖ್ಯವಾದ್ದು ಎಂದು ವಿದ್ವಾಂಸರು ಹೇಳುತ್ತಾರೆ. ಇದನ್ನು ನೋಡಲು ಎರಡು ವಿಧಾನವು ಇದೆ. ಒಂದನ್ನು ಎಮಿಕ್ ವಿಧಾನ ಎಂದು ಕರೆಯುತ್ತಾರೆ. ಮತ್ತೊಂದು ಎಟಿಕ್ ವಿಧಾನ. ಎಮಿಕ್ ವಿಧಾನ ಎಂದರೆ ಧರ್ಮವನ್ನು ಒಳಗಿನಿಂದ ನೋಡುವುದು. ಎಟಿಕ್ ಎಂದರೆ ಧರ್ಮವನ್ನು ಹೊರಗಿನಿಂದ ನೋಡುವುದು. ಇಲ್ಲಿ ಹೊರಗಿನವರು ಬರೀ ವೀಕ್ಷಕರು ಮಾತ್ರವೇ ಆಗಿರುತ್ತಾರೆ. ಅವರು ಬದಲಾವಣೆಯನ್ನು ನೋಡುವುದು ವೀಕ್ಷಣೆಯ ದೃಷ್ಟಿಕೋನದಲ್ಲಿ. ದೇವತಾಶಾಸ್ತ್ರವೂ ಇಲ್ಲಿ ಮುಖ್ಯ. ಸಮಾಜಶಾಸ್ತ್ರಜ್ಞರು ಧರ್ಮವನ್ನು ಹಂಚಿದ ನಂಬಿಕೆಗಳು ಮತ್ತು ಆಚರಣೆಗಳ ಸಾಂಸ್ಕೃತಿಕ ವ್ಯವಸ್ಥೆಮದು ಭಾವಿಸುತ್ತಾರೆ. ಆದರೆ ಎಲ್ಲಾ ಧರ್ಮಗಳು ಒಂದು ಅಲೌಕಿಕವಾದ ಶಕ್ತಿಯ ಇದೆ ಎಂದು ತಿಳಿಯುತ್ತಾರೆ. (ಡರ್ಖೆಮ್ 20006 ಪುಟ 534)

ವಾಸ್ತವವಾದಿ ಕಾದಂಬರಿಗಳ ಮುಕ್ತಾಯವನ್ನು ನಾವು ಹೀಗೆಯೇ ಮುಕ್ತಾಯವಾಗುತ್ತದೆ ಎಂದು ಹೇಳುವಂತೆ ಇಲ್ಲ. ಅದರ ಕ್ರಿಯೆ ಎನ್ನುವುದು ಪ್ರಾತಿನಿಧಿಕವಾದ ಕ್ರಿಯೆಯ ಆಗಿರುತ್ತದೆ. ವಾಸ್ತವವಾದಿ ಕತನಗಳ ಮುಕ್ತಾಯವು ಇತರ ಕಾದಂಬರಿಗಳ ಮುಕ್ತಾಯದಂತೆ ಇರುವುದಿಲ್ಲ. ಇದರ ರೂಪವು ಬೇರೆಯಾಗಿರುತ್ತದೆ. ಸಂಯೋಜನೆ ಮತ್ತು ಮುಕ್ತಾಯ ಎರಡೂ ಇದರಲ್ಲಿ ಬೇರೆ ವಿಧಾನವನ್ನು ಅನುಸರಿಸುತ್ತಿರುವುದು ಸತ್ಯ. ವಾಸ್ತವವಾದಿ ಕಾದಂಬರಿಯ ಮುಕ್ತಾಯವು ನಿಶ್ಚಿತವಾಗದೆ ಇರಬಹುದಾದ ಸಾಧ್ಯತೆಯನ್ನು ಹೇಳುತ್ತದೆ. ಅದರಲ್ಲಿ ಮುಕ್ತಾಯವನ್ನು ಒಂದು ಸಮಸ್ಯೆ ಎನ್ನುವ ಫರ ಹೇಳಿ ಕಾದಂಬರಿಕಾರನು ಮುಕ್ತಾಯ ಮಾಡಬಹುದು. ಲೇಖಕನು ಒಂದು ಪರಿಹಾರವನ್ನು ಹೇಳುವುದಿಲ್ಲ. ವಾಸ್ತವದದ ಭಾಷೆಯೂ ಕೂಡಾ ನಾವು ಹೇಳುವ ರೀತಿಯಲ್ಲಿ ಇರುವುದಿಲ್ಲ. ಅಂದರೆ ಅದಕ್ಕೆ ಕಾವ್ಯಾತ್ಮಕವಾದ ಭಾಷೆಯ ಅಷ್ಟು ಒಗ್ಗುವುದಿಲ್ಲ.

ಆದ್ದರಿಂದ ಒಂದು ಪ್ರಶ್ನೆಯಲ್ಲಿಯೂ ಅದು ಮುಕ್ತಾಯವಾಗಬಹುದು. ಇದನ್ನು ಕರ್ಮೋಡ್ ಹೇಳುತ್ತಾನೆ. ಓದುಗನ ನಿರೀಕ್ಷೆ ಮತ್ತು ಕಾವ್ಯದ ಮುಕ್ತಾಯವು ಒಂದೇ ಆಗಬೇಕಾಗಿಲ್ಲ ಎನ್ನುವುದು ಅವನ ವಾದ.

ಹಾಗೆಯೇ ಭಾರತೀಯ ವಸಾಹತುಶಾಹಿ ವಿದ್ಯಮಾನವನ್ನು ಗಮನಿಸಿಕೊಂಡು ಹೇಳುವುದಿದ್ದರೆ ವಸಾಹತು ಅನುಕರಣೆಯು ಭಾರತೀಯ ಪ್ರಾದೇಶಿಕ ಸಂಸ್ಕೃತಿಯ ಜೊತೆಗೆ ಅಂತರವಿರಿಸಿಕೊಳ್ಳುವುದೆಂದು ಮಾತ್ರ. ಇದರ ಜೊತೆಗೆ ಅನುಕರಣೆಯು ಪ್ರತಿಯಾದ ಮತ್ತೊಂದು ಬಿಂಬವಲ್ಲ. ವಸಾಹತುಕಾಲದ ರಾಷ್ಟ್ರೀಯ ಆಂದೋಲನಕಾರರು ರೂಪಿಸಿದ 'ರಾಷ್ಟ್ರೀಯ ಹೋರಾಟ'ವನ್ನು ಕೂಡಾ ಈ ಹಿನ್ನೆಲೆಯಿಂದಲೇ ಗಮನಿಸಬಹುದು.

ವಸಾಹತುಶಾಹಿ ಆಳಿತ ಮತ್ತು ರಾಷ್ಟ್ರೀಯ ಆಂದೋಲನಕಾರರ ನಡುವೆ ಇದ್ದ ವಿರುದ್ಧ ಪರಿಕಲ್ಪನೆಗಳು ಇವು. ಎರಡರ ಮೂಲದಲ್ಲಿ ಭಿನ್ನ ತಾತ್ವಿಕತೆಗಳಿವೆ. ಇದೇ ಸಂದರ್ಭದಲ್ಲಿ ಭಾರತದಲ್ಲಿ ಬ್ರಿಟೀಶ್ ಅಧಿಕಾರಿಗಳು ನೇಮಿಸಿದ ಭಾರತದ ಗ್ರಾಮೀಣ ಜನರ ಮಟ್ಟಿಗೆ – ಆದರೂ ಬ್ರಿಟೀಶರಂತೆ ಕಾಣಿಸಿದ್ದರಲ್ಲಿ ಆಶ್ಚರ್ಯವಿಲ್ಲ. ಗ್ರಾಮಾಯಣ ಕಾದಂಬರಿಯಲ್ಲಿ ಬರುವ ಕೆಲವು ವಿವರಗಳನ್ನು ಇಲ್ಲಿ ಉಲ್ಲೇಖಿಸಬೇಕು. ಗಿಬ್ಸನ್ ಸಾಹೇಬ, ಪಾದಳ್ಳಿಗೆ ಬಂದ ಅಸಿಸ್ಟೆಂಟ್ ಕಲೆಕ್ಟರ್, ಕೃಷ್ಣರಾಯ ಪಾದಳ್ಳಿಗೆ ಬಂದ ಮಾಮಲೇದಾರ, ಫಕರುದ್ದೀನ್ ಸಾಹೇಬ – ಪಾದಳ್ಳಿಗೆ ಬಂದ ಪೌಜದಾರರು, ಕೇಶವರಾಯ ಮಾಮಲೇದಾರ, ಇವರೆಲ್ಲ ಸರಕಾರದ ಅಧಿಕಾರಿಗಳು. ಶಿಲೇದಾರ ಲಕ್ಷ್ಮಣ, ಹೊಳೆಯರಿಗೆ ಪರಂಗಿಯವರಂತೆ ಕಾಣಿಸುತ್ತಾರೆ. ಇಡೀ ಕಾದಂಬರಿಯ ಒಂದರ್ಥದಲ್ಲಿ ಇದನ್ನು ಬಿಂಬಿಸುತ್ತದೆ. ಗ್ರಾಮಾಯಣ ಕಾದಂಬರಿಯ ಪ್ರಾರಂಭವಾಗುವುದೇ ಈ ರೀತಿಯ ವಿವರಗಳಿಂದ : ಸರಂಜಾಮೀ ಪದ್ಧತಿಯನ್ನು ಆಧರಿಸಿ ನಿಂತ ಸಮಾಜದ, ಅದರ ಪರಮ ಇಷ್ಟಾರ್ಥವೆನಿಸಿದ ಸಾಮ್ರಾಜ್ಯಶಾಹಿಯ ಸುಗ್ಗಿಯ ಕಾಲವಾದ ಹತ್ತೊಂಬತ್ತನೆಯ ಶತಮಾನ ಗತಿಸಿ ಹೊಸ ಶತಮಾನ ಇನ್ನೇನು ಹೊಸ ಧ್ಯೇಯಗಳನ್ನು ತೋರುವುದೋ ಎಂದು ನಾಡಿನಲ್ಲಿ ಕುತೂಹಲ ಪ್ರಾರಂಭವಾಗಿತ್ತು. ಸ್ವಾತಂತ್ರ್ಯ, ಸಮತೆ, ರಾಷ್ಟ್ರೀಯತೆ ಮೊದಲ ಹೊಸ ವಿಚಾರಗಳಿಂದ ತುಂಬಿದ ಇಪ್ಪತ್ತನೆಯ ಶತಮಾನ ಕಾಲಿಡುವ ಸಂಧಿಕಾಲ ನಮ್ಮದೇಶದಲ್ಲಿ ಮಹತ್ತ್ವದ ಸ್ಥಿತ್ಯಂತರದ ಕಾಲ. ಹಳೆಯ ಸರಂಜಾಮಿ ಪದ್ಧತಿ ಅಳಿದಿಲ್ಲ. ಹೊಸ ಸಾಮಾಜಿಕ ಸಮಸ್ಯೆ ರೂಪುಗೊಂಡಿಲ್ಲ. ಪರಕೀಯರ ಪ್ರಭುತ್ವದಿಂದ ದೇಶವನ್ನು ವ್ಯಾಪಿಸಿದ ಅಜ್ಞಾನ, ಬಡತನಗಳ ಕಾರ್ಗತ್ತಲೆ ಹರಿದಿಲ್ಲ. ದರ್ಪದ ಅಧಿಕಾರೀ ವರ್ಗದ ಸ್ವೇಚ್ಛಾಚಾರ, ಸ್ವಾರ್ಥಿಗಳ ಕುಟಿಲ ಕಾರಸ್ಥಾನ, ಇದೇ ನ್ಯಾಯವೆಂಬ ಭಾವನೆಯಿಂದ ತಗ್ಗುತ್ತಾ ನಡೆದಿದ್ದರೂ ಅಜ್ಞರು, ದುರ್ಬಲರು ಇವರ ಜಾಲದ ಭೀತಿಯಿಂದ ಮುಕ್ತರಾಗಿಲ್ಲ. ವೇದ ಕಾಲದಿಂದ ನಡೆದು ಬಂದ ಜಾತೀಯ ಪದ್ಧತಿಗೆ ಸರಂಜಾಮಿ ಪದ್ಧತಿಯ ಅಂಗವಾಗಿ ಹೊಸ ವರ್ಗ ಪದ್ಧತಿಯೊಂದು ಜೊತೆಯಾಗಿತ್ತು. ಅದರ ಫಲವಾದ ಸಾಮಾಜಿಕ ರೀತಿ–ನೀತಿಗಳು ಇನ್ನೂ ಅಳಿದಿರಲಿಲ್ಲ (ಗ್ರಾಮಾಯಣ, ಭಾಗ–1). ಈ ಕಾದಂಬರಿಯಲ್ಲಿ **ಟಿಕಟುಬರುಟಿ** ಗುನ್ನೆದಾರ ಜನಾಂಗವೆಂದು. ಇವರನ್ನು ಸರಕಾರವು ಗಣಿಸಿ ಕ್ರಿಮಿನಲ್ ಟ್ರ್ಯೈಬ್ಸ್ ಎಂದು ಸೆಟಲ್‌ಮೆಂಟಿನಲ್ಲಿ ಕೆಲವು ಕಾಲ ಇಟ್ಟಿತ್ತು. ಇದರಲ್ಲಿ ಉಲ್ಲೇಖವಾದಂತೆ, ಬ್ರಿಟೀಶ್ ಅಧಿಕಾರದ ಕ್ರಮವು ಹಳೆಯ ಪದ್ಧತಿಯೊಂದಿಗೆ ಹೊಸ ಪದ್ಧತಿಯ ಸೇರಿಕೊಂಡುದರ ಫಲವಾಗಿ ಗ್ರಾಮೀಣ ಜನರು ತಳ್ಳಣಗಳಿಂದ ಬದುಕುವಂಥ ಸ್ಥಿತಿಯ ನಿರ್ಮಾಣಗೊಂಡಿತು. ಕಲಿತವರಿಗೆ ಪರಂಪರೆ ಅನ್ನುವುದು ಅನುಮಾನ ಹುಟ್ಟಿಸಿತು. ಆದರೆ ಸಾಮಾನ್ಯ ಜನರು ಪರಂಪರೆ ಮತ್ತು ಸಂಪ್ರದಾಯಗಳೊಂದಿಗೆ ಬದುಕುವಂಥ ಸ್ಥಿತಿಯ ನಿರ್ಮಾಣಗೊಂಡಿತು. ಜಾತಿ– ಮತಗಳನ್ನು ರಾಷ್ಟ್ರವನ್ನು ರಾಷ್ಟ್ರವನ್ನು ಕಟ್ಟಬೇಕೆನ್ನುವುದು ವಿದ್ಯಾವಂತ ವರ್ಗದ ಒಂದು ಮಾನಸಿಕ ಸ್ಥಿತಿ. **ಟಿತೊಲಗಿಸಿ** ಮತದ ಅಂಧಕಾರವನ್ನು**ಟಿ** ಎನ್ನುವುದು ವಿದ್ಯಾವಂತ ಜನರ ಒಂದು ಮಾನಸಿಕ ಸ್ಥಿತಿ, ವಿದ್ಯಾವಂತ ಜನರು ಸಾಂಸ್ಕೃತಿಕ ವೈವಿಧ್ಯತೆಗಳನ್ನು ತಮ್ಮ ಬರಹದೊಳಗೆ ತಂದು, **ಟಿತಾಯಿನಾಡುಟಿ** ಎಂದರೇನು ಎಂಬುದನ್ನು ಬೇರೆ ಬೇರೆ ರೀತಿಯಲ್ಲಿ ನಿರೂಪಿಸಲು ತೊಡಗಿದರು. ಅಷ್ಟೇ ಹೊಸ ರೀತಿಯ ಸಾಂಸ್ಕೃತಿಕ ಪರಿಕಲ್ಪನೆಗಳು ಹುಟ್ಟಿಕೊಂಡವು. ಇದು ಎಷ್ಟರ ಮಟ್ಟಿಗೆ ಮುಂದೆ ಬಂತೆಂದರೆ, ಸಂಪ್ರದಾಯ, ಆಚರಣೆ, ಮೌಲ್ಯಗಳನ್ನು ಹೊಸ ಸಂದರ್ಭದೊಂದಿಗೆ ವ್ಯಾಖ್ಯಾನಿಸಬೇಕಾಗಿ ಬಂತು. ಇದು ಚಾರಿತ್ರಿಕ ಅನಿವಾರ್ಯತೆಯಾಯಿತು. ಇದರೊಂದಿಗೆ ನಗರ ಕೇಂದ್ರಿತ ಬುದ್ಧಿ ಜೀವಿಗಳು (Urban Central Intellectual) ವಿದ್ಯೆ, ಬುದ್ಧಿವಂತಿಕೆ (ಈ ಬುದ್ಧಿವಂತಿಕೆಯ ಬ್ರಿಟೀಶ್ ಆಳಿತದ ಫಲವಾಗಿ ಹುಟ್ಟಿಕೊಂಡವು ಮತ್ತು ಪಶ್ಚಿಮದ ಚಿಂತನೆಯ ಕ್ರಮದಲ್ಲಿ ತಮ್ಮ ವ್ಯಕ್ತಿತ್ವ ರೂಪಿಸಿಕೊಂಡವರು) ಭಾರತವನ್ನು, ಪ್ರದೇಶವನ್ನು ನೋಡಿದ ಕ್ರಮ ಒಂದು ರೀತಿಯಾದರೆ, ಭಾರತದ ಗ್ರಾಮೀಣ ಜನರು ಬೇರೆ ರೀತಿಯಲ್ಲಿ ನೋಡಬೇಕಾಯಿತು. ಇದು ಕೊಂಚ ಜಟಿಲವಾದ ಸಾಂಸ್ಕೃತಿಕ ಪ್ರಶ್ನೆ. ಒಂದು ಕಡೆಯಿಂದ ಈ ರೀತಿಯ ಚಿಂತನೆಯು ಹುಟ್ಟಿಕೊಂಡರೆ ವಿದೇಶಿ ಆಳಿತದ ಕೆಟ್ಟ ನೀತಿಯ ವಿರುದ್ಧ ದೇಶೀಯ

ತುಂಬಾ ಒಳ್ಳೆಯ ಸಂಪ್ರದಾಯಗಳನ್ನು ಪುನರ್ ಪ್ರತಿಪಾದಿಸುವುದು ಸೂಕ್ತವೆಂದು ಪರಿಭಾವಿಸಿದರು. ಕನ್ನಡ ಅತ್ಯುತ್ತಮ ಉದಾಹರಣೆಯೆಂದರೆ ಕುವೆಂಪು ಬರಹಗಳು.

ಇದೇ ಸಂದರ್ಭದಲ್ಲಿ ದೇಶೀಯ ವಿದ್ವಾಂಸರು ರೂಪಿಸಿದ ಮೂರು ಕ್ರಮಗಳೆಂದರೆ,

ಅ. ಸಂಸ್ಕೃತಿಯೇ ಒಂದು ಅಧಿಕಾರ. ಇದು ಬ್ರಿಟೀಶ್ ಆಡಳಿತ ಶಾಹಿಯ ವಿರುದ್ಧ ನಿಲ್ಲಲು ಬಳಸಿಕೊಂಡ ಒಂದು ಪರಿಕಲ್ಪನೆ.

ಆ. ಪುನರ್ ನೆನಪುಗಳ ಮೂಲಕ ಅನನ್ಯತೆಯನ್ನು ಕಟ್ಟಿಕೊಳ್ಳುವ ಪ್ರಯತ್ನ. ಉದಾ : ಕಾರಂತರ ಮರಳಿ ಮಣ್ಣಿಗೆ, ಕುವೆಂಪು ಅವರ ಕಾನೂರು ಹೆಗ್ಗಡಿತಿ, ಮಲೆಗಳಲ್ಲಿ ಮದುಮಗಳು.

ಕಾರಂತರ ಮಾತು ಇಲ್ಲಿ ಉಲ್ಲೇಖನೀಯ : 1921 ಸೆಪ್ಟಂಬರ್ ತಿಂಗಳಲ್ಲಿ ನಾಗಪುರದಲ್ಲಿ ಕಾಂಗ್ರೆಸ್ಸಿನ ವಿಶೇಷ ಅಧಿವೇಶನ ನಡೆಯಿತು. ನನ್ನ ಸಹಪಾಠಿಗಳಾದ ಪದ್ಮ ರಾಜ ಅರಿಗರು ಅಲ್ಲಿಗೆ ಹೋಗಿ ಬಂದರು. ಗಾಂಧೀಜಿಯವರು ಅಸಹಕಾರ ಸಂದೇಶವನ್ನು ಎಲ್ಲೆಡೆಗೂ ಸಾರಿದರು. ಅಕ್ಟೋಬರ್ ಸುಮಾರಿಗೆ ಬಾಲಗಂಗಾಧರ ತಿಲಕರು ತೀರಿಕೊಂಡ ವಾರ್ತೆ ನಮ್ಮಲ್ಲಿ ವಿಶೇಷ ಉದ್ವೇಗವನ್ನು ಉಂಟುಮಾಡಿತು. ಆಗಲೇ ನನ್ನ ಒಬ್ಬ ವಿದ್ಯಾರ್ಥಿ ಮಿತ್ರ ತಿಲಕರ ಚರಮ ಶ್ಲೋಕವನ್ನು ಬರೆದು, ಒಂದೇ ದಿನ ಸಾವಿರ ಪ್ರತಿಗಳಿಗಿಂತ ಹೆಚ್ಚಿಗೆ ಮಾರಾಟ ಮಾಡಿದ. ಅದಾದ ಸ್ವಲ್ಪ ಸಮಯದಲ್ಲೇ ಖಿಲಾಫತ್ ಚಳವಳಕ್ಕಾಗಿ ಗಾಂಧೀಜಿಯವರು ಆಲಿ ಸೋದರರೊಂದಿಗೆ ಮಂಗಳೂರಿಗೆ ಬಂದು ಹೋದರು. ಇದರಿಂದಾಗಿ ವಿದ್ಯಾರ್ಥಿವೃಂದದಲ್ಲಿ ಸ್ವದೇಶಿ, ಸ್ವರಾಜ್ಯ ಆಂದೋಲನಗಳು ಮನಸ್ಸನ್ನು ಸೆಳೆಯ ತೊಡಗಿದವು (ಹುಟ್ಟು ಮನಸ್ಸಿನ ಹತ್ತು ಮುಖಗಳು, 1994, ಪು. 32). ಆದರೆ ಅನಂತರ ಕಾರಂತರಿಗೆ ಗಾಂಧಿಯ ನಿಲುವಿನ ಬಗ್ಗೆ ಅಸಮಾಧಾನವಾಗಿರುವುದು ಬೇರೆ ಪ್ರಶ್ನೆ.

ಶಿವರಾಮ ಕಾರಂತರು ತಾವು ರಾಷ್ಟ್ರೀಯ ಚಳುವಳಿಯಲ್ಲಿ ತೊಡಗಿಸಿಕೊಂಡ ವಿಚಾರವನ್ನು ಹೀಗೆ ಹೇಳಿದ್ದಾರೆ : ಈ ರಾಷ್ಟ್ರೀಯ ಚಳವಳಿಯಿಂದಾಗಿ ನಮ್ಮೆಲ್ಲರಿಗೂ ಒಂದು ಉಪಕಾರವೇನೋ ಆಯಿತು. ನಾವೆಲ್ಲ ಕನ್ನಡದಲ್ಲಿ ಉಪನ್ಯಾಸ ಮಾಡಲು ಕಲಿತೆವು ; ಕಾಂಗ್ರೆಸ್ಸಿನ ಪ್ರಚಾರಕರಾದೆವು. ಉಪನ್ಯಾಸದ ವಿಷಯಗಳಿಗೆ ಬರಗಾಲವಿದೆಯೇ ? ಗಾಂಧೀಜಿಯವರ Young India ಪತ್ರಿಕೆಯನ್ನು ಅಭ್ಯಾಸ ಮಾಡಿ, ಸ್ವದೇಶಿ ಸತ್ಯಾಗ್ರಹ, ಖಾದಿ, ಅಸಹಕಾರ, ಉಪ್ಪಿನ ಸುಂಕ, ವಿದೇಶೀಯ ಬಟ್ಟೆಗಳ ಬಹಿಷ್ಕಾರ, ವಿದೇಶಿಯ ಸಕ್ಕರೆಯ ಬಹಿಷ್ಕಾರ – ಇವುಗಳ ಮೇಲೆ ಉಪನ್ಯಾಸ ಬಿಗಿಯುತ್ತಿದ್ದವು. ನಮ್ಮ ರೋಷಕ್ಕೆ ಜಲಿಯನ್ ವಾಲಾಬಾಗ್ ಪ್ರಸಿದ್ಧಿಯ ಡಯರ್ ಮತ್ತು ಮೈಕಲ್ ಓಡ್ಡಯರ್ ಇಬ್ಬರು – ಸದಾ ಬಲಿಗಳು. ಅಮೃತ ಸರದ ಕೊಲೆಯನ್ನು ಕಂಡವರಿಗಿಂತ ಹೆಚ್ಚಾಗಿ ಬಣ್ಣಿಸಿದೆವು. ವಿದೇಶೀಯ ಬಟ್ಟೆಗಳನ್ನು ಸುಟ್ಟುಹಾಕಬೇಕೆಂದು ಪ್ರೇರಿಸಿದೆವು. ಆ ವಿಷಯದಲ್ಲಿ ರವೀಂದ್ರನಾಥ ಠಾಕೂರರಿಗೂ, ಗಾಂಧೀಜಿಯವರಿಗೂ ವಿವಾದವಿದ್ದಾಗ ನನ್ನ ಸಹಾನುಭೂತಿ ಗಾಂಧೀಜಿಯವರ ಕಡೆಗೆ ಮೀಸಲಾಗಿತ್ತು (ಅದೇ, ಪು. 35). ಕಾರಂತರು ಸ್ವತಃ ಚಳುವಳಿಗಾರರಾಗಿದ್ದರು. ಖಾದಿ ಉತ್ಪನ್ನ ಚಳುವಳಿ, ಗಾಂಧಿ ಪಂಥದಿಂದ ಉಪ್ಪು ಮೇಣಸುಗಳು ತ್ಯಾಜ್ಯವಾಗಿದ್ದವು ಎಂದು ಬರೆದುಕೊಂಡಿದ್ದಾರೆ :

ಒಂದೆರಡು ದಿವಸಗಳ ಕಾಲ ಮುಂಬಯಿ ನಗರ ತೆರತೆರನ ಸುದ್ದಿಗಳಿಂದ ಕುದಿಯಿತು. ಮೂರನೆಯ ಸ್ವಾತಂತ್ರ್ಯ ಸಂಗ್ರಾಮ ತೊಡಗಿದೆಯಾದರೂ ಅದನ್ನು ಕುರಿತು ಸುದ್ದಿಗಳಿಗೆ, ಪ್ರಕಟಣೆಗಳಿಗೆ ಪ್ರತಿಬಂಧಕ ಆಜ್ಞೆಗಳು ಹೊರಟವು. ಸಾರ್ವಜನಿಕ ಸಭೆ, ಮೆರವಣಿಗೆಗಳು ನಿಷೇಧಿಸಲ್ಪಟ್ಟವು. ಸರಕಾರ ತನ್ನ ಬಿಗಿಯನ್ನು ಬೆಳೆಯಿಸಿ, ಜನರೊಡನೆ ತಾನಾಗಿ ಜಗಳ ಕಾಯುತ್ತಿದ್ದಂತೆ ಕಾಣಿಸಿತು. ದೇಶದ ಎಲ್ಲ ಕಡೆಗಳಲ್ಲಿಯೂ ಧಿಕ್ಕಾರದ ಸಭೆ, ಮೆರವಣಿಗೆಗಳಾದವು. ಲಾರಿ, ಗುಂಡಿನೇಟುಗಳ ಪ್ರಕರಣಗಳು ನಡೆದವು. ಸರಕಾರದ ಕ್ರೌರ್ಯಕ್ಕೆ ಸಮತೂಕದಲ್ಲಿ ಜನತೆ ಉದ್ದಿಗ್ನವಾಯಿತು. ಜನರು ಅಹಿಂಸೆಯನ್ನು ಈ ಬಾರಿ ಮರೆತಂತೆ ಕಂಡಿತು (ಅದೇ, ಪು. 425).

ಸ್ವಾತಂತ್ರ್ಯ ಹೋರಾಟ, ಬ್ರಿಟೀಶರ ಆಡಳಿತ, ಎಲ್ಲವೂ ಸೇರಿ ಜನಸಾಮಾನ್ಯರ ಬದುಕು ಕಾಡಿನಲ್ಲಿ ಕಣ್ಣು ಕಟ್ಟದಂತೆ ಆಯಿತು. ನಾಳೆ ದಿನವಾದರೂ ಗಾಂಧಿಯ ಕೃಪೆಯಿಂದ ತಮ್ಮ ಬದುಕು ತಮಗೆ ಸಿಕ್ಕೀತು ಎಂದು ಒಳ ದನಿ ನುಡಿಯುತ್ತಿತ್ತು. ಆದರೆ ಅವರ ಎದೆ ಬಡಬಡಿಸಿದ್ದು, ಕಾವಲಿಲ್ಲದ ಅಡಿಕೆ ತೋಟವನ್ನು ನೋಡಿ. ವರ್ಷವೆಲ್ಲ, ದಂಬೆ ನೀರಿದ್ದರೂ, ನೀರಿನ ಹನಿಯನ್ನು ಅದಕ್ಕೆ ಚೆಲಿದವರಿಲ್ಲ. ಮರಗಳೆಲ್ಲ ಬಾಡಿದ್ದವು. ಮರಗಳಲ್ಲಿ ಸಿಂಗಾರಹೂವು ಹೆಸರಿಗೆ ಮಾತ್ರ ಇತ್ತು. ಬೇಲಿಯ ಹೊರಗಿನ ಲಂಟಾನ ಗಿಡಗಳು ತೋಟವನ್ನು ಆಕ್ರಮಿಸಿದ್ದವು. ಅವರ ಎದೆಯ ಬಿಸಿ ಉಸಿರನ್ನು

ಸೂಸಿತು. ಔಂದು ವರ್ಷ ಹೀಗೆ ಹಾಳಾದ ತೋಟ, ನಾಲ್ಕು ವರ್ಷ ದುಡಿದರೆ ಸಮವಾಗುತ್ತದೆಯೇ ? ಎಂದರು. ಈ ಎಲ್ಲ ವ್ಯಥೆಯನ್ನು ಹೊತ್ತುಕೊಂಡೇ ಈಚಣ್ಣಯ್ಯನವರ ಮನೆಗೆ ಹೋದುದು. ತನ್ನ ನೆಲವನ್ನು ನೋಡುವ ಮೊದಲು ತನ್ನ ಜನರನ್ನು ನೋಡುವುದಕ್ಕೆ ಮನಸ್ಸಾಗಲಿಲ್ಲ. ಮನೆಯ ಕಡೆಗೆ ಹೋಗುತ್ತ ತಮ್ಮ ಮುದಿ ಚಿಕ್ಕ ತಂದೆ, ಹೆಂಡತಿ, ಮಕ್ಕಳ ನೆನಪಾಯಿತು. ಮಕ್ಕಳನ್ನು ನೋಡುವುದು ಇನ್ನೆಷ್ಟು ದಿನಕ್ಕೋ ಎಂದು ತೋರಿತು (ಅದೇ, ಪು. 267).

ಪೌರಾತ್ಯ ರಾಷ್ಟ್ರೀಯತೆಯ ಕಲ್ಪನೆಯು ಈಚಿನದು. ಇದಕ್ಕೂ ನಾಗರಿಕತೆಯ ಪರಿಕಲ್ಪನೆಗೂ ಸಂಬಂಧ ಕಲ್ಪಿತವಾಯಿತು. ಭಾರತವು ಸ್ವತಂತ್ರವಾದರೆ ಇನ್ನೂ ಹೆಚ್ಚಿನ ಅಭಿವೃದ್ಧಿ ಸಾಧ್ಯವೆಂಬ ವಾದವನ್ನು ರಾಷ್ಟ್ರೀಯತಾವಾದಿ ನೇತಾರರು ಮಂಡಿಸಿದರು. ಆದರೆ ರಾಷ್ಟ್ರೀಯತೆಯು ಎಲ್ಲರಿಗೂ ಸಂಬಂಧಿಸಿದ ಪ್ರಕ್ರಿಯೆಯಾಗಿರಲಿಲ್ಲ. ಅದು ನಿರ್ದಿಷ್ಟ ವರ್ಗವನ್ನು ಅವಲಂಬಿಸಿತ್ತು. ಹಾಗೂ ರಾಷ್ಟ್ರೀಯವಾದಿ ಚಿಂತನೆಯು ಸ್ವಯಂ ಸಂಪೂರ್ಣವಾದ ಚಳುವಳಿ ಆಗಿರಲಿಲ್ಲ. ಈ ಹಿನ್ನೆಲೆಯಿಂದ ಕಾರಂತರ ಕುಡಿಯರ ಕೂಸು, ಕುವೆಂಪುರವರ ಕಾನೂರು ಹೆಗ್ಗಡಿತಿ, ಮಲೆಗಳಲ್ಲಿ ಮದುಮಗಳು, ರಾವ್ ಬಹದ್ದೂರ್ ಅವರ ಗ್ರಾಮಾಯಣ ಕಾದಂಬರಿಗಳನ್ನು ಗಮನಕ್ಕೆ ತಂದುಕೊಳ್ಳಬಹುದು. ಕುಡಿಯರ ಕೂಸು ಕಾದಂಬರಿಯಲ್ಲಿ ಬರುವ ಕುಡಿಯರಿಗೆ, ಕುವೆಂಪು ಕಾದಂಬರಿಯಲ್ಲಿ ಬರುವ ಐತ–ಪೀಂಚಲುವಿಗೆ, ಗ್ರಾಮಾಯಣದಲ್ಲಿ ಬರುವ ಚಿಮಣಾ, ದಾದಾರಂಥವರಿಗೆ ರಾಷ್ಟ್ರೀಯತೆಯ ಅರಿವು ಇಲ್ಲ. ಅವರ ಮಟ್ಟಿಗೆ ರಾಷ್ಟ್ರೀಯತೆಯೆನ್ನುವ ಪದವೇ ಅಪರಿಚಿತವಾದದ್ದು.

ಇದರೊಂದಿಗೆ ಇನ್ನೊಂದು ಸಮಸ್ಯೆಯನ್ನು ನಾವು ಗಮನಕ್ಕೆ ತಂದುಕೊಳ್ಳಬಹುದು. ಕೆಲವು ರಾಷ್ಟ್ರೀಯತಾವಾದಿ, ಸ್ವಾತಂತ್ರ್ಯವಾದಿ ಚಿಂತಕರ ಪ್ರಕಾರ ಆಧುನಿಕರಾಗುವುದೆಂದರೆ ಆಧುನಿಕ ಜ್ಞಾನದ ಮಾದರಿಯ ಜೊತೆ ಅನುಸಂಧಾನ ನಡೆಸುವುದು. ನೆಹರೂ ಈ ಮಾದರಿಯ ಚಿಂತನೆಯ ಕ್ರಮದ ನೇತಾರರಾಗಿದ್ದರು. ಹೀಗಾಗಿ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಅಧಿಕಾರದ ನಡುವೆ ದ್ವಂದ್ವಾತ್ಮಕ ಸಂಬಂಧ ಉಂಟಾಯಿತು. ನಮ್ಮ ರಾಷ್ಟ್ರೀಯ ಚಿಂತನೆಯು

1.   ಉದಾರವಾದಿ ಭಾವುಕ ನೆಲೆ

2.   ಉದಾರವಾದಿ ಮಾನವತಾವಾದಿ ಚಿಂತನೆ

3.   ದೇಶ ಭಕ್ತಿಯ ಪಾವಿತ್ರ್ಯ

ವೈಜ್ಞಾನಿಕ ಚಿಂತನೆಯು ಮನುಷ್ಯರಿಗೆ ಎಂಬುದನ್ನು ಈ ಚಿಂತಕರು ಮರೆಯಲಿಲ್ಲ. ಆರ್ಥಿಕ ಪ್ರಗತಿಯು ಮನುಷ್ಯರನ್ನು ಆಧುನಿಕ ಜಗತ್ತಿಗೆ ಬೇಕಾದಂತೆ ತಯಾರುಗೊಳಿಸಬಹುದು. ಹೀಗೆ ಅನೇಕ ರೀತಿಯ ಪ್ರಶ್ನೆಗಳಿಗೆ ರಾಷ್ಟ್ರೀಯವಾದಿಗಳು ಉತ್ತರಿಸಬೇಕಾಗಿತ್ತು. ಅಂದರೆ ಇಲ್ಲಿ ಎರಡು ರೀತಿಯ ಧಾರೆಯನ್ನು ನಾವು ಕಾಣಬಹುದು.

1.   ಪ್ರಭುತ್ವಕ್ಕೆ ಎದುರಾಗಿ ಭಾರತೀಯ ಸನಾತನೆಯನ್ನು ಎತ್ತಿ ಹಿಡಿದ ಸನಾತನ ವಾದಿ ಚಿಂತಕರು.

2.   ವೈಜ್ಞಾನಿಕ ಚಿಂತನೆ, ವಿಚಾರವಾದ, ಮುಂತಾದ ವಿಷಯಗಳಿಗೆ ಬ್ರಿಟೀಶ್ ಅಧಿಕಾರದೊಂದಿಗೆ ಸಹಯೋಗ ಪಡೆದುಕೊಂಡು ಆ ಮುಖೇನ ಭಾರತೀಯತೆಯನ್ನು ಹೊಸ ಜಗತ್ತಿಗೆ ಅಣಿಗೊಳಿಸುತ್ತಾ ಔರಾಷ್ಟ್ರಔದ ಬಗ್ಗೆ ಚಿಂತಿಸಿದವರು.

ಎರಡನೆಯ ಪಂಥವು ಮುಖ್ಯವಾಗಿ ಜಗತ್ತಿನ ಮೇಲೆ ಅಧಿಕಾರ ನಡೆಸಲು ಹೊಸ ಜ್ಞಾನದ ಅರಿವು ಅಗತ್ಯವೆಂದು ಪ್ರತಿಪಾದಿಸಿತು. ಹೀಗಾಗಿ ವೈಚಾರಿಕತೆ ಅನ್ನುವುದು ವಿಶ್ವಾತ್ಮಕತೆಯ ಸಮಸ್ಯೆಯನ್ನು ಒಳಗೊಂಡಿತು. ಮತ್ತು ಈ ಮಾದರಿಯ ಚಿಂತನೆಯು ಸಾಪೇಕ್ಷವಾಯಿತು. ಅದು ಭಾರತದ ಮಟ್ಟಿಗೆ ಅಷ್ಟು ಸರಳವಾಗಿರಲಿಲ್ಲ. ಕುವೆಂಪು, ಕಾರಂತರು, ಗೌರೀಶ ಕಾಯ್ಕಿಣಿ, ಮೂರ್ತಿರಾಯರು ಮುಂತಾದವರ ಚಿಂತನೆಯನ್ನು ನಾವು ಇಲ್ಲಿ ನೆನಪಿಸಿಕೊಳ್ಳಬಹುದು. ಔನಮ್ಮ ಅಳತೆಯನ್ನು ಮೀರಲಾಗದ ದೇವರುಔ ಎಂಬಂಥ ಲೇಖನವು ಹುಟ್ಟಿರುವುದು ಆ ಕಾಲದಲ್ಲಿ. ಇದು ಮಹತ್ವದ ಚರ್ಚೆಯ ಕುರಿತು ಹೇಳಿದಂತೆ ಕಾಣಿಸುತ್ತದೆ. ಒಂದು ಸಮಾಜವು ಇಟ್ಟುಕೊಂಡಿರುವ ನಂಬಿಕೆಯು ಸತ್ಯವೇ, ಸುಳ್ಳೇ, ವೈಜ್ಞಾನಿಕವೇ, ಅವೈಜ್ಞಾನಿಕವೇ, ಎಂಬುದನ್ನು ಶೋಧಿಸಲು ನಾವು ಬಳಸಿಕೊಳ್ಳುವ ವಿಧಾನವು (ಆಧುನಿಕ ವಿಜ್ಞಾನ ಪರಿಕರಗಳನ್ನು ಬಳಸಿಕೊಂಡರೂ), ಅದು ಅಷ್ಟು ಸುಲಭವಲ್ಲ. ನಮ್ಮ ಸಾಮಾಜಿಕ ಅನೇಕ ಸಮಸ್ಯೆಗಳಿಗೆ, ಸಂಪ್ರದಾಯಗಳಿಗೆ ಕೆಲವು ನಿರ್ದಿಷ್ಟ ರೂಪದ ಸಾಮಾಜಿಕ, ಚಾರಿತ್ರಿಕ ಹಿನ್ನೆಲೆಗಳಿವೆ. ಅವು ಸಂಕೀರ್ಣವಾಗಿವೆ. ಅದು ಈಗಷ್ಟೇ ಹುಟ್ಟಿಕೊಂಡಿರುವ ನಂಬಿಕೆಯಾಗಿರುವುದಿಲ್ಲ. ಭಾರತೀಯ ಸಮಾಜದ ಅನೇಕ ನಂಬಿಕೆಗಳು, ಸಂಪ್ರದಾಯಗಳು ಮೂಲತಃ ಪ್ರಯೋಗ, ಪರೀಕ್ಷೆ ಇತ್ಯಾದಿಗಳಿಂದ ಹುಟ್ಟಿಕೊಂಡಿಲ್ಲ. ಯಾರು ಇದನ್ನು ಪ್ರಶ್ನಿಸಲು ತೊಡಗಿದರೋ ಅವರನ್ನು ನಾವು ವೈಚಾರಿಕರೆಂದು ಕರೆದೆವು. ಮತ್ತು ವಿಚಾರವಾದವನ್ನೇ ಅನಂತರದ ಕಾಲಘಟ್ಟದಲ್ಲಿ ವೈಜ್ಞಾನಿಕ ಚಿಂತನೆಯೆಂದು ಕರೆಯಲಾಯಿತು. ಈ ಕಾರಣದಿಂದ

ಅನಂತರದ ಕಾಲಘಟ್ಟದಲ್ಲಿ ಇದು ಒಂದು ಮಾದರಿಯ ಸಾಂಸ್ಕೃತಿಕ ಪ್ರಶ್ನೆಯಾಯಿತು. ಇದೇ ಕಾರಣಕ್ಕೆ ಗಾಂಧಿಯವರು ಆಧುನಿಕತೆ ವಿಜ್ಞಾನ ಮತ್ತು ಪ್ರಗತಿಯ ಕಲ್ಪನೆಯ ಹಿಂದಿರುವ ರಾಷ್ಟ್ರೀಯತೆಯ ಚಹರೆಯನ್ನು ಪ್ರಶ್ನಿಸಿರುವುದು, ಆಧುನಿಕತೆ, ಕೈಗಾರೀಕರಣಗಳು, ಅಭಿವೃದ್ಧಿಯ ಪ್ರಶ್ನೆ ಮುಂತಾದವು ಭಾರತವನ್ನು ಮತ್ತಷ್ಟು ಕಷ್ಟಕ್ಕೆ ಗುರಿಪಡಿಸಬಹುದು ಗಾಂಧಿ ಹೇಳಿದ್ದು ಇದೇ ಕಾರಣಕ್ಕೆ. ಆಗ ಯಾಂತ್ರಿಕ ಜಗತ್ತನ್ನು ಸ್ವಾಗತಿಸುವಾಗ ಅದರೊಂದಿಗೆ ಇರುವ ಕೇಡನ್ನು ಕೂಡಾ ಗ್ರಹಿಸಬೇಕೆಂದು ಗಾಂಧಿ ಹೇಳಿದ್ದರು. ಹೀಗಾಗಿ ಆಧುನಿಕ ರಾಷ್ಟ್ರೀಯತಾವಾದಿಗಳು, ಸನಾತನ ವಾದಿಗಳ ನಡುವೆ ಬಿಕ್ಕಟ್ಟುಗಳಿದ್ದವು. ಅವುಗಳ ನಡುವೆ ಅನೇಕ ವೈರುದ್ಧ್ಯಗಳಿದ್ದವು. ಹಳೆಯ ಸಂಪ್ರದಾಯಗಳನ್ನು ತ್ಯಜಿಸಿ ಹೊಸ ಸಮಾಜ ಕಟ್ಟಬೇಕೆಂದು ವಾದಿಸಿದ ರಾಜಾರಾಂ ಮೋಹನ್ ರಾಯ್ (1772–1883) ಒಂದು ಕಡೆಗೆ ಇದ್ದರು. ಹೊಸ ವೈಜ್ಞಾನಿಕ ಚಿಂತನೆಯ ಆಗಮನದ ಬಗ್ಗೆ, ಪ್ರಗತಿಪರ ಚಿಂತನೆಯ ಬಗ್ಗೆ ಗಾಂಧಿ ಅನುಮಾನ ವ್ಯಕ್ತಪಡಿಸುವುದು ಮಾತ್ರವಲ್ಲ. ಅವರು ಅದನ್ನು ಆಧುನಿಕ ಪುನರುಜ್ಜೀವನ ಚಳುವಳಿಯ ಸೃಷ್ಟಿಯೆಂದು ಕರೆಯುತ್ತಾರೆ. ವಿಚಾರವಾದಿ ಚಿಂತನೆಯು ಹೊಸತೊಂದು ಅಧಿಕಾರ ರೂಪದ ಆಗಮನವೂ ಹೌದು ಎಂದು ನೆಹರೂ ಭಾವಿಸಿದ್ದರು. ಈ ಎರಡು ಅಭಿಪ್ರಾಯಗಳ ನಡುವೆ ಭಿನ್ನಸ್ತರಗಳಿವೆಯೆಂಬುದನ್ನು ಗಮನಿಸಬೇಕು.

ಹೀಗೆ ರಾಷ್ಟ್ರೀಯತೆಯ ಚಿಂತನೆಯು ಬ್ರಿಟೀಶ್ ಪ್ರಭುತ್ವದೊಂದಿಗೆ ಇಟ್ಟುಕೊಂಡ ಸಂಕಥನಗಳಾಗಿವೆ. ಮತ್ತು ಆಗಿನ ವಸಾಹತು ಶಾಹಿಯ ಜ್ಞಾನವೆಂಬುದು ಸರಳವಾಗಿರಲಿಲ್ಲ.

ಗ್ರಾಮ್ಸಿಯು ಮೂರು ರೀತಿಯ ರಾಷ್ಟ್ರೀಯತೆಯನ್ನು ಗುರುತಿಸುವುದು ಈ ಹಿನ್ನೆಲೆಯಿಂದ ಮುಖ್ಯವಾಗಿದೆ :

1. ಒಂದು ವಸ್ತು ನಿಷ್ಠ ರಚನೆಗೆ ಸಂಬಂಧಿಸಿರುವುದು–ಇದು ಸ್ವತಂತ್ರವಾದ ಮನುಷ್ಯನ ಭಾವನೆಗಳಿಗೆ ಸಂಬಂಧಿಸಿಕೊಂಡು ರೂಪುಗೊಂಡಿರುತ್ತದೆ.

2. ರಾಜಕೀಯ ಬಲದೊಂದಿಗೆ ರೂಪುಗೊಳ್ಳುವ ರಾಷ್ಟ್ರೀಯತೆ, ಇದಕ್ಕೆ ಏಕತೆಯ ಸ್ವರೂಪವು ಬೇಕಾಗುತ್ತದೆ. ಸ್ವಯಂ ಅರಿವಿನ ಅಗತ್ಯ ಇರುತ್ತದೆ. ಅನೇಕ ಸಾಮಾಜಿಕ ಗುಂಪುಗಳನ್ನು ಇದು ಒಂದು ಕಡೆಗೆ ತರುವ ಪ್ರಯತ್ನ ಮಾಡುತ್ತದೆ.

3.   ಮಿಲಿಟರಿ ಅಧಿಕಾರದೊಂದಿಗೆ ಬರುವ ರಾಷ್ಟ್ರೀಯತೆ.

ಗ್ರಾಮ್ಸಿಯು ಬಂಡವಾಳವಾದಿ ಪ್ರಭುತ್ವ, ಅಮೇರಿಕಾವಾದಿ, ಫೋರ್ಡಿಸಂ ಬಗ್ಗೆ ಹೇಳುತ್ತಾ, ಉದಾರವಾದಿ ಸ್ವಾತಂತ್ರ್ಯ, ಆರ್ಥಿಕ ವೈಯಕ್ತಿಕತೆಯನ್ನು ಇದು ಪ್ರತಿಪಾದಿಸುತ್ತದೆಯೆಂದು ಹೇಳುತ್ತಾನೆ. ಆದರೆ ಭಾರತೀಯ ಮಾದರಿಯ ರಾಷ್ಟ್ರೀಯತಾವಾದಿ ಚಳುವಳಿಯು ಎರಡು ಪರಿಕಲ್ಪನೆಗಳನ್ನು ತನ್ನ ಮುಂದಿರಿಸಿಕೊಂಡಿತು. ಒಂದು ಹಳೆಯ ಸಾಂಪ್ರದಾಯಿಕ ಪದ್ಧತಿಗಳ ವಿದಾಯದ ಪರಿಕಲ್ಪನೆ. ಎರಡನೆಯದಾಗಿ, ವಿಚಾರವಾದಿ, ವಿಜ್ಞಾನಪರವಾದ ಚಿಂತನೆಗಳಿಂದ ಹುಟ್ಟಿಕೊಂಡ ರಾಷ್ಟ್ರೀಯತೆ ಆಗಮನದ ಪರಿಕಲ್ಪನೆ. ಇದರಲ್ಲಿ ಭಾರತೀಯ ಅಭಿವೃದ್ಧಿಯೆಂದರೆ ಬೃಹತ್ ಕೈಗಾರಿಕೆಗಳು, ವಿಜ್ಞಾನ ಪರವಾದಿ ಚಿಂತನೆಗಳು ಮುಖ್ಯ.

ಆದರೆ ಗಾಂಧಿಯವರು ಮೂಲತಃ ಆಧುನಿಕತೆಯ ಚಿಂತನೆಯೊಂದಿಗೆ ಬಂದ ನಾಗರಿಕ ಪ್ರಭುತ್ವದ ಬಗ್ಗೆ ಅನುಮಾನವುಳ್ಳವರಾಗಿದ್ದರು. ಗಾಂಧಿಯವರು ಆಧುನಿಕ ಬ್ರಿಟೀಶ್ ಪ್ರಭುತ್ವ, ಅದರ ನೈತಿಕತೆ, ಅದರ ರಾಜಕಾರಣ, ಎಲ್ಲವೂ ಅದರ ಹಿಂದಿರುವ ಅರ್ಥಶಾಸ್ತ್ರವನ್ನು ಹೊಂದಿದೆಯೆಂದು ಗಾಂಧಿ ನಂಬಿದ್ದರು. ಯುರೋಪ್ ಕೇಂದ್ರಿತ ನಾಗರಿಕ ಸಮಾಜವನ್ನು ಗಾಂಧಿಯವರು ವಿಮರ್ಶಾತ್ಮಕವಾಗಿ ನೋಡಿದ್ದರು. ಎರಡನೆಯದು ಗಾಂಧಿಯವರ ಪ್ರಕಾರ. ಆಧುನಿಕ ನಾಗರಿಕ ಸಮಾಜವ ಹುಟ್ಟಿಕೊಂಡಿರುವುದೇ ಪುನರುಜ್ಜೀವನ ಕಾಲಘಟ್ಟವು ರೂಪಿಸಿರುವ ರಾಜಕೀಯ ಸಂಸ್ಥೆಗಳ ಆಧಾರದ ಮೇಲೆ. ಇದಕ್ಕೆ ಪ್ರತಿಕ್ರಿಯೆಯಾಗಿ ಗಾಂಧಿ ಭಾರತೀಯ ಮೂಲದ – ಜೈನ ತತ್ವಜ್ಞಾನದ ಅಹಿಂಸ, ಸತ್ಯಾಗ್ರಹದ ಪ್ರಯೋಗಕ್ಕೆ ಇಳಿದಿದ್ದರು. ಗಾಂಧಿಯವರ ಪ್ರಕಾರ ಸತ್ಯಾಗ್ರಹವು ಒಂದು ರಾಜಕೀಯ ಚಟುವಟಿಕೆ, ಅದಕ್ಕೆ ನೈತಿಕ ಚೌಕಟ್ಟಿದೆ. ಹಾಗೆಂದು ಸತ್ಯಾಗ್ರಹ, ಕರನಿರಾಕರಣೆಯ ಚಳುವಳಿಯಲ್ಲಿ ಎಲ್ಲರೂ ತೊಡಗಿಸಿಕೊಂಡಿರಲಿಲ್ಲ. ಈ ಮೊದಲು ಹೇಳಿರುವಂತೆ ಸತ್ಯಾಗ್ರಹವು ಧಾರ್ಮಿಕ ಹಿನ್ನೆಲೆಯಿಂದ ಹುಟ್ಟಿಕೊಂಡಿದ್ದರೂ ಅದರ ಪ್ರಯೋಗ ಮಾತ್ರ ತಾಂತ್ರಿಕವಾಗಿ ರಾಜಕೀಯ ಚಟುವಟಿಕೆಯಾಗಿತ್ತು. 1930ರಲ್ಲಿ ದಂಡಿಯಲ್ಲಿ ಉಪ್ಪಿನ ಸತ್ಯಾಗ್ರಹವು ಪ್ರಾರಂಭವಾದಾಗ ಭಾರತೀಯ ಪ್ರಜಾಪ್ರಭುತ್ವವು ಯಾವ ರೀತಿಯಲ್ಲಿರಬೇಕೆಂದು ಗೊತ್ತಿಲ್ಲವೆಂದು ಸ್ವತಃ ಗಾಂಧಿ ಹೇಳಿದ್ದರು. ಯಾವ ದಾರಿಯಲ್ಲಿ ಜನರನ್ನು ತಲುಪಬಹುದೆಂದು ತಿಳಿಯದ ಗಾಂಧಿ ಎರಡೇ ದಾರಿಯಿರುವುದು ಎಂದು ಹೇಳುತ್ತಾರೆ. ಒಂದು ಬಲಾತ್ಕಾರ, ಮತ್ತೊಂದು ಸತ್ಯಾಗ್ರಹ. ಈ ದೃಷ್ಟಿಯಿಂದ ಗಾಂಧಿಯ ರಾಜಕೀಯ ನಿಲುವು ಸರಳವಲ್ಲ ಎಂಬುದನ್ನು ಒತ್ತಿಕೊಟ್ಟು ಗಮನಿಸಬೇಕು.

ಗ್ರಂಥ ಋಣ

1. ಕಾರಂತ   – ಔದಾರ್ಯದ ಉರುಳಲ್ಲಿ

2. ಕುಡಿಯರ ಕೂಸು

3. ಮಿರ್ಜಿ ಅಣ್ಣಾರಾಯ – ಗ್ರಾಮಾಯಣ

4. ಕಾರಂತ   – ಹುಚ್ಚು ಮನಸ್ಸಿನ ಹತ್ತು ಮುಖಿಗಳು

5. ಕೆ. ಕ್ಲಾರ್ಕ್ 1952 ದ ನೇಚರ್ ಆಫ್ ಎಕ್ಸ್‌ಪ್ಲನೇಶನ್

NEP 2020- ಸವಾಲುಗಳು ಮತ್ತು ಅವಕಾಶಗಳು

ಡಾ. ಗುರುಸ್ವಾಮಿ ಹಿರೇಮಠ

ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಕನ್ನಡ ವಿಭಾಗ, ಸರಕಾರಿ ಪ್ರಥಮ ದರ್ಜೆ ಕಾಲೇಜು, ನವನಗರ, ಬಾಗಲಕೋಟೆ.

ಸಾರಾಂಶ: (Abstract)

ಭಾರತ ಸ್ವಾತಂತ್ರ್ಯ ನಂತರ ಒಂದು ಪ್ರಜಾತಂತ್ರ ದೇಶವಾಗಿ ತನ್ನನ್ನು ಆಂತರಿಕವಾಗಿ ಮತ್ತು ಬಾಹ್ಯವಾಗಿ ಕಟ್ಟಿಕೊಳ್ಳುವ ಮತ್ತು ಅಂತರಾಷ್ಟ್ರೀಯ ಮಟ್ಟದಲ್ಲಿ ತನ್ನ ಅಸ್ಮಿತೆಯನ್ನು ರುಜುವಾತು ಪಡಿಸುವ, ಹೆಚ್ಚಿಸಿಕೊಳ್ಳುವ ಅನಿವಾರ್ಯತೆಯನ್ನು ಪ್ರತಿಕ್ಷಣವೂ ಎದುರಿಸುತ್ತಲೇ ಬರುತ್ತಿದೆ. ಅದರಲ್ಲೂ ಬಹು ಭಾಷೆಯ, ಸಂಸ್ಕೃತಿ, ಧಾರ್ಮಿಕ ವಿಚಾರಧಾರೆಗಳು, ನಂಬಿಕೆಗಳು, ರೂಢಿ–ಸಂಪ್ರದಾಯಗಳು ಮತ್ತು ವೈವಿಧ್ಯಮಯವಾಗಿರುವ ಭೌಗೋಳಿಕ ಪರಿಸರದಂತಹ ಅಂಶಗಳು ಪ್ರತಿಯೊಂದು ಯೋಜನೆ ಮತ್ತು ನೀತಿ–ನಿರೂಪಣೆಗಳ ಮೇಲೆ ಪರಿಣಾಮ ಬೀರುವ ಕಾರಣ ಈ ಎಲ್ಲ ಸಂಗತಿಗಳನ್ನು ಅನುಲಕ್ಷಿಸುವ ಮತ್ತು ಕಾರ್ಯಯೋಜನೆಗಳನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಜಾರಿಗೆ ತರುವ ಜವಾಬ್ದಾರಿಗಳನ್ನು ಇದುವರೆಗೆ ಆಳ್ವಿಕೆ ಮಾಡುತ್ತಾ ಬಂದಿರುವ ಸರಕಾರಗಳು ನಿಭಾಯಿಸುತ್ತಾ ಬಂದಿವೆ. ಈ ಎಲ್ಲ ವಿಚಾರಗಳ ಫಲವಾಗಿ ಈಗಾಗಲೇ ಸಾಮಾಜಿಕ, ಸಾಂಸ್ಕೃತಿಕ, ಆರ್ಥಿಕ ಮತ್ತು ಶೈಕ್ಷಣಿಕ ನೀತಿ–ಆಯೋಗಗಳನ್ನು, ರಚಿಸುವ ಮೂಲಕ ಕಾಲಕಾಲಕ್ಕೆ ಆಗಿರುವ ಮತ್ತು ಆಗುತ್ತಿರುವ ಬದಲಾವಣೆಗಳನ್ನಾಧರಿಸಿ ಅನೇಕ ಕ್ರಮಗಳು ಮತ್ತು ಉಪಕ್ರಮಗಳು ಜಾರಿಯಲ್ಲಿವೆ. ಅದರಲ್ಲೂ ಹೊಸ ಹೊಸ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸುತ್ತಿರುವ ಭಾರತೀಯ ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರವು ಮಗುವಿನ ಕ್ರಿಯಾಶೀಲತೆ, ಸೃಜನಶೀಲತೆ, ಅನುಭವಗಳು, ಆತ್ಮವಿಶ್ವಾಸ ಮತ್ತು ಮನೋಬಲವನ್ನು ಹೆಚ್ಚಿಸುತ್ತಾ ಬದುಕಿನ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸುವ ಮತ್ತು ಸರ್ವಾಂಗೀಣ ವಿಕಾಸದ ಆಶಯದೊಂದಿಗೆ ಜೀವನ ಮಟ್ಟವನ್ನು ಇನ್ನಷ್ಟು ಉತ್ತಮಗೊಳ್ಳಲು ಇವನ ಪ್ರಯತ್ನ ಅವ್ಯಾಹತವಾಗಿ ಸಾಗಲು ಬೇಕಾದ ಸಂಗತಿಗಳ ಶೋಧವು ನಡೆಯುತ್ತಲೇ ಇದೆ. ಆದರೂ ವ್ಯಕ್ತಿಕ ಮತ್ತು ಸಮೂಹದಲ್ಲಿ ಬಂದರೆಗುವ ಸವಾಲುಗಳು ಒಮ್ಮೊಮ್ಮೆ ಆತನ ಮನೋಬಲವನ್ನು ಕುಗ್ಗಿಸುವ, ಆತ್ಮವಿಶ್ವಾಸವನ್ನು ನಾಶಗೊಳಿಸುವ ಸಂಗತಿಗಳು ಘಟಿಸುತ್ತವೆ. ಆದಾಗ್ಯೂ ಮತ್ತೆ ಅಂತಹ ಸಂದರ್ಭಗಳಿಂದ ಹೊರ ಬರುವ ಪ್ರಯತ್ನಗಳಂತೂ ನಿರಂತರವಾಗಿ ನಡೆಯುತ್ತಲೇ ಇವೆ. ವ್ಯಕ್ತಿ ತನಗನುಕೂಲವಾಗುವಂತೆ ಈ ಜಗತ್ತನ್ನು/ಸನ್ನಿವೇಶವನ್ನು ತಿದ್ದಲು ಸಾಧ್ಯವಿಲ್ಲವಾದರೂ ತನ್ನ ಮನಃಶಾಂತಿಯನ್ನು, ನೆಮ್ಮದಿಯ, ಆತ್ಮಗೌರವದ ಜೀವನಕ್ಕೆ ದಕ್ಕೆಯುಂಟಾಗುವಂತಹ ಶೋಷಣೆಗಳಿಂದ ದೂರವಿರುವ ಮತ್ತು ಅಂತಹ ಸಂದರ್ಭಗಳನ್ನು ಎದುರಿಸುವ ಮಾರ್ಗಗಳನ್ನು ಶೋಧಿಸುವ ಪ್ರಯತ್ನವೇ ಶಿಕ್ಷಣದ ಹೆಸರಿನಲ್ಲಿ ಆತನನ್ನು ಮುನ್ನಡೆಸುತ್ತದೆ. ಅಲ್ಲದೇ ಅದುವೇ ಪ್ರತಿಕ್ಷಣವೂ ಮಗುವಿನ/ಮನುಷ್ಯನಲ್ಲಿ ಹೊಸ ಹೊಸ ಚೈತನ್ಯಕ್ಕೆ ಪ್ರೇರೇಪಿಸುತ್ತದೆ. ಹೀಗೆ ಪ್ರೇರೇಪಿಸುವ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯೂ ಅನೇಕ ಸವಾಲುಗಳಿಗೂ ತಂದು ನಿಲ್ಲಿಸುವ ಮತ್ತು ಹೊಸ ಸಮಸ್ಯೆಗಳಿಗೆ ಸಾಕ್ಷಿಯಾಗಿಸುವ ಸಂದರ್ಭಗಳನ್ನೂ ಹುಟ್ಟುಹಾಕುತ್ತದೆ. ಹೀಗಾಗಿ ಇವತ್ತು ಮಗುವಿನ ಶಿಕ್ಷಣವು ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣದೊಂದಿಗೆ ಪ್ರಾರಂಭವಾಗಿ ಪ್ರೌಢ, ಪದವಿ–ಪೂರ್ವ, ಸ್ನಾತಕ, ಸ್ನಾತಕೋತ್ತರ ಮತ್ತು ವೃತ್ತಿಪರವಾದ ಪದವಿಯೊರಗಿನ ಶಿಕ್ಷಣದ ಆದ್ಯತೆಗಳನ್ನು ಆಧರಿಸಿ ಸವಾಲುಗಳನ್ನು ಮತ್ತು ಪರಿಹಾರಗಳನ್ನು ಹುಟ್ಟುಹಾಕುತ್ತಿರುವ ಪ್ರಮುಖ ಕ್ಷೇತ್ರವಾಗಿದೆ.

ಅದರಲ್ಲೂ ಬದಲಾಗುತ್ತಿರುವ ಕಾಲಘಟ್ಟದೊಂದಿಗೆ ಹೆಚ್ಚುತ್ತಿರುವ ಜನಸಂಖ್ಯೆ, ವಿದ್ಯಾರ್ಥಿ ಹಾಗೂ ಶಿಕ್ಷಕ ಮತ್ತು ಪಾಲಕರ ಮದ್ಯ ಹುಟ್ಟಿಕೊಳ್ಳುತ್ತಿರುವ ಹೊಸ ಹೊಸ ಸವಾಲುಗಳು ಒಂದೆಡೆಯಾದರೆ; ಅಸಮರ್ಥವಾಗುತ್ತಿರುವ ಪಾಲಕತ್ವವನ್ನು ದುರುಪಯೋಗಪಡಿಸಿಕೊಳ್ಳುತ್ತಿರುವ ಯುವಜನಾಂಗದ ಮನೋಧೋರಣೆಗಳು ಇಂತಹ ಸವಾಲಿನ ಸಂದರ್ಭಗಳಲ್ಲಿ ಅದರಲ್ಲೂ ಶಿಕ್ಷಣವೆನ್ನುವುದು ಇವತ್ತಿನ ಎಲ್ಲ ಸಮಸ್ಯೆ ಮತ್ತು ಸವಾಲುಗಳಿಗೆ ಒಂದು ಆಶಾವಾದವಾಗಿ ರೂಪುಗೊಳ್ಳುತ್ತಿದೆ. ಆದ್ದರಿಂದ ಶಿಕ್ಷಣವೆನ್ನುವುದು ಇವತ್ತು ಕೇವಲ ಜ್ಞಾನಾರ್ಜನೆಯ ಮಾರ್ಗವಾಗಿ ಉಳಿದಿಲ್ಲ. ಅದು ಮಗುವಿನ ದೈಹಿಕ ಮತ್ತು ಮಾನಸಿಕವಾದ ಅನೇಕ ಬದಲಾವಣೆಗೆ ತೀವ್ರವಾಗಿ ಸ್ಪಂದಿಸುವ, ವಿದ್ಯಾರ್ಥಿಗಳು ಈ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆ ಹುಟ್ಟು ಹಾಕುವ ಹೊಸ ಪರಿಸರಕ್ಕೆ ಒಗ್ಗಿಕೊಳ್ಳುವಾಗ ಎದುರಿಸುವ ಪ್ರತಿರೋಧಗಳನ್ನು ಆಧರಿಸಿ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020 ಹೊಸ ಹೊಸ ಚರ್ಚೆಗಳನ್ನು ಮತ್ತು ಸಾಧ್ಯತೆಗಳನ್ನು ನಮ್ಮ ಮುಂದಿಟ್ಟಿದೆ. ಈ ಎಲ್ಲ ಅಂಶಗಳ ಹಿನ್ನೆಲೆಗಳನ್ನು, ಪೂರ್ವಾಪರಗಳನ್ನು ಹಾಗೂ ಈ ಶಿಕ್ಷಣ ನೀತಿಯೊಳಗಿನ ಧನಾತ್ಮಕ ಸಂಗತಿಗಳನ್ನು ಮತ್ತು ಆಗಬಹುದಾದ ರೂಪಾಂತರಗಳನ್ನು ಪ್ರಸ್ತುತ ಲೇಖನದಲ್ಲಿ ಚರ್ಚಿಸಲಾಗಿದೆ.

ಮುಖ್ಯಪದಗಳು (Keywords); ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ –2020, ಈ ನೀತಿಯ ಸವಾಲುಗಳು ಮತ್ತು ಅವಕಾಶಗಳು.

ಪೀಠಿಕೆ. ಭಾರತೀಯ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ಇತ್ತೀಚಿನ ದಿನಗಳಲ್ಲಿ ಅನೇಕ ಚರ್ಚೆಗಳನ್ನು ಹುಟ್ಟು ಹಾಕುತ್ತಿದೆ. ಮಾತ್ರವಲ್ಲ ಈ ದಿಶೆಯಲ್ಲಿ ಮುನ್ನಡೆಯಬೇಕಾದ ಅನಿವಾರ್ಯತೆಗಳನ್ನು, ಸವಾಲುಗಳನ್ನು ಮತ್ತು ಅವಕಾಶಗಳನ್ನು ಸೃಷ್ಟಿಸುವ, ಅವುಗಳನ್ನು ಬಳಸಿಕೊಳ್ಳುವ ಕಾರ್ಯವಿಧಾನಗಳನ್ನು ತೆರೆದಿಡುವ ಪ್ರಯತ್ನವನ್ನು ಮಾಡುತ್ತಿದೆ. ಇದರೊಂದಿಗೆ ಮಗುವಿನ **ಜ್ಞಾನ, ಕೌಶಲ್ಯಗಳು, ಉದ್ಯೋಗ,** ಉದ್ಯೋಗದಲ್ಲಿ ಆಗುತ್ತಿರುವ **ಶ್ರೇಣೀಕರಣ** ಮತ್ತು ಉದ್ಯೋಗಾಧಾರಿತವಾಗಿ ರೂಪಗೊಳ್ಳುತ್ತಿರುವ **ಸಾಮಾಜಿಕ ಮಾನದಂಡಗಳು** ಹುಟ್ಟುಹಾಕುತ್ತಿರುವ ಮೇಲು–ಕೀಳಿನ ಭಾವನೆಗಳು, ಆ ಮೂಲಕ ಉದ್ಯೋಗಿಗಳು ಹಾಗೂ ಪಾಲಕರಲ್ಲಿ ಮತ್ತು ಸಾಮಾಜಿಕ ವ್ಯವಸ್ಥೆಯಲ್ಲಿನ ಬಾಂಧವ್ಯದಲ್ಲಿನ ಬಿರುಕುಗಳು, ಕುಟುಂಬ ವ್ಯವಸ್ಥೆಯ ನಂಬಿಕೆಯಲ್ಲಾಗುತ್ತಿರುವ ಪಲ್ಲಟಗಳು ಅಲ್ಲದೆ ಸಣ್ಣ–ಸಣ್ಣ ವಿಷಯಗಳು ಗಂಭೀರ ಸ್ವರೂಪವನ್ನು ಪಡೆದುಕೊಂಡು ಪ್ರತಿಯೊಂದಕ್ಕೂ ಪ್ರತಿಕ್ರಿಯೆಸುವುದು ಸಾಮಾನ್ಯವಾಗುತ್ತಿದೆ. ಎಂಬ ವಿಚಾರಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ಮತ್ತು ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020 ಇದು ನಿರ್ದೇಶಿಸುವ ಅನುಕೂಲಗಳು ಮತ್ತು ಅನಾನುಕೂಲದ ಅಂಶಗಳ ತಿಳಿದುಕೊಳ್ಳುವುದು ಗಮನಾರ್ಹವಾಗಿದೆ. ಆಧರಿಸಿ ಈ ಲೇಖನದಲ್ಲಿ ಗಮನಿಸಲಾಗಿದೆ.

ಒಂದು ದೇಶದ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ತಾನು ಹಾಕಿಕೊಂಡಿರುವ ಗುರಿ ಉದ್ದೇಶಗಳನ್ನು ತನ್ನ ನಾಗರಿಕರ ಮೂಲಕ ಸಾಧಿಸುವ ಮಹತ್ತರ ಆಶಯವನ್ನು ಹೊಂದಿರುತ್ತದೆ. ಆ ನಿಟ್ಟಿನಲ್ಲಿ ಅದು ಪ್ರಾಥಮಿಕ ಹಂತದ ಶಿಕ್ಷಣವನ್ನು ಅಡಿಪಾಯವಾಗಿಸಿಕೊಂಡು ಅದರ ಫಲವನ್ನು ಉನ್ನತ ಶಿಕ್ಷಣದ ಮೂಲಕ ಸಾಕಾರಗೊಳಿಸಿಕೊಳ್ಳುತ್ತದೆ. ಹಾಗಾಗಿ ಪ್ರತಿಯೊಬ್ಬ ಮಗು ಸಹ ಏನ್ನನ್ನು ಕಲಿಯಬೇಕೆಂಬುದನ್ನು ನಿರ್ಧರಿಸುವ ಹಕ್ಕು ಇದ್ದಾಗ್ಯೂ ಅದು ರಾಷ್ಟ್ರೀಯ ಹಿತಾಸಕ್ತಿಯನ್ನು ಅನುಲಕ್ಷಿಸಿಯೇ ರೂಪಿಸಿಕೊಳ್ಳಬೇಕಾಗುತ್ತದೆ. ಆದ್ದರಿಂದ ಭಾರತೀಯ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ಈ ಸಂಗತಿಯನ್ನು ಬಹು ಜವಾಬ್ದಾರಿ ಹಾಗೂ ಸಮಕಾಲೀನ ಮತ್ತು ಭವಿಷ್ಯತ್ತಿನ ಸವಾಲುಗಳನ್ನು ಬಹಳ ಗಂಭೀರವಾಗಿ ಪರಿಗಣೆಸುವ ಅವಕಾಶಗಳನ್ನು ಮುಕ್ತವಾಗಿಸಿಕೊಂಡು ರೂಪಿಸುತ್ತಾ ಬರುತ್ತಿದೆ. ಈ ಎಲ್ಲ ಸಂಗತಿಗಳನ್ನು ಆಧರಿಸಿ ಕಾಲಕಾಲಕ್ಕೆ ಅಗತ್ಯ ಬದಲಾವಣೆಗಳನ್ನು ತರುವಾಗ ತನ್ನ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಕಷ್ಟ–ಸುಖ, ಲಾಭ–ನಷ್ಟಗಳು, ಶೀತ–ಉಷ್ಣ ಮುಂತಾದ ದ್ವಂದ್ವಗಳು ಜೀವನದ ಅವಿಭಾಜ್ಯ ಅಂಗವೆಂಬುದನ್ನು ಮನದಟ್ಟಾಗಿಸುವ ಮತ್ತು ಅವುಗಳನ್ನು ಸರಿಯಾದ ರೀತಿಯಲ್ಲಿ ಸ್ವೀಕರಿಸುವ, ಸಹಿಸಿಕೊಳ್ಳುವ ಮನೋಭಾವನೆಯನ್ನು ರೂಪಿಸುವ ಜವಾಬ್ದಾರಿಯನ್ನು ಹೊಂದಿದೆ. ಮಾತ್ರವಲ್ಲದೇ ಈ ಪ್ರತಿಯೊಂದು ಅನುಭವಗಳು ಮಗುವಿನ ಬೆಳವಣಿಗೆಯಲ್ಲಿ ಮಹತ್ತರ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತವೆ ಎಂಬುದನ್ನು ದೃಢೀಕರಿಸುತ್ತದೆ. ಇದರೊಂದಿಗೆ ಎಂದಿಗೂ, ಯಾವ ಪರಿಸ್ಥಿತಿಯಲ್ಲಿಯೂ ನಮ್ಮ ಕರ್ತವ್ಯವನ್ನು ಹೇಗೆ ನಿರ್ವಹಿಸಬೇಕೆಂಬುದನ್ನು ಜಾಗೃತಗೊಳಿಸುವುದೇ ಇದುವರೆಗೆ ಜಾರಿಗೆ ಬಂದಿರುವ ಶಿಕ್ಷಣ ನೀತಿಗಳ ಮುಖ್ಯ ಆಶಯವೂ ಆಗಿದೆ. ಮಾತ್ರವಲ್ಲದೇ ಶಿಕ್ಷಣ ನೀತಿಗಳು ಮಗುವಿನಲ್ಲಿ ಕೇವಲ ತನ್ನ ಪ್ರಯೋಜನಕ್ಕಾಗಿ ಮಾತ್ರ ಶಿಕ್ಷಣವನ್ನು ಕಲಿಯದೇ ಅದನ್ನು ಸಮಷ್ಟಿಯ ಒಳಿತಿಗಾಗಿ ದಕ್ಷತೆಯಿಂದ ನಿರ್ವಹಿಸುವುದನ್ನು ಬಯಸುತ್ತದೆ. ಹಾಗೆಯೇ ವಿದ್ಯಾರ್ಥಿ ತನ್ನನ್ನು ತಾನು ಉದ್ಧರಿಸಿಕೊಳ್ಳುವ ಮತ್ತು ಸಮುದಾಯದ ಏಳಿಗೆಯನ್ನು ಬಯಸುವ ಮನೋಧೋರಣೆಗಳನ್ನು ರೂಪಿಸಿಕೊಳ್ಳುವ ಅನಿವಾರ್ಯತೆಯನ್ನು ಮನವರಿಕೆ ಮಾಡಿಕೊಡುತ್ತಿದೆ. ಇದನ್ನು ವೃಷ್ಟಿ–ಸಮಷ್ಟಿ ಪ್ರಜ್ಞೆಯ ಭಾಗವಾಗಿ ಗ್ರಹಿಸುವ ಮತ್ತು ವ್ಯಕ್ತಿತ್ವದ ಮಹತ್ತರವಾದ ಅಂಶವೆಂಬುದನ್ನು ರೂಪಿಸುತ್ತಿದೆ. ಆದ್ದರಿಂದ ಮಗುವಿನ ವ್ಯಕ್ತಿತ್ವವು ರೂಪಗೊಳ್ಳುವುದು ಕೇವಲ ಅದರ ದೈಹಿಕ ಬೆಳವಣಿಗೆಗೆ ಮಾತ್ರ ಸೀಮಿತವಾಗಿರದೇ ಸಾಮಾಜಿಕ, ಸಾಹಿತ್ಯಿಕ, ರಾಜಕೀಯ, ಸಾಂಸ್ಕೃತಿಕ, ಆರ್ಥಿಕ, ವೈಜ್ಞಾನಿಕ ಮತ್ತು ವೈಚಾರಿಕ ಸಂಗತಿಗಳೊಂದಿಗೆ ಆರೋಗ್ಯಕರವಾದ ಆಧ್ಯಾತ್ಮಿಕ ಸಮಾಜವನ್ನು ಮುಖಾ–ಮುಖಿಯಾಗುವ ಸಂದರ್ಭಗಳನ್ನು ಸೃಷ್ಟಿಸುವ ಮತ್ತು ಮರುಸ್ಥಾಪಿಸಿಕೊಳ್ಳುವ ದೃಷ್ಟಿಕೋನವನ್ನು ಬೆಳೆಸುವುದನ್ನು ಬಯಸುತ್ತದೆ. ಇದರೊಂದಿಗೆ ಮಗು ತನಗೆ ಎದುರಾಗುವ ಸಂಗತಿಗಳಿಗೆ ಉದ್ವೇಗಗೊಳ್ಳದೇ ತಾನು ಸಹ ತನ್ನ ಸಮಕಾಲೀನ ಸಮಾಜವೂ ಉದ್ವೇಗಗೊಳ್ಳದ ಹಾಗೇ ಹರ್ಷ, ಕೋಪ, ಭಯ, ಸಂಭ್ರಮ, ಅಸೂಹೆಗಳನ್ನು ಮೀರುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಅರಿವಿಗೆ ತರುವುದನ್ನು ಅಪೇಕ್ಷಿಸುತ್ತದೆ. ಈ ಎಲ್ಲ ಅಂಶಗಳನ್ನು ಆಧರಿಸಿ **'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020'** ಅನ್ನು ಗ್ರಹಿಸುವ ಮತ್ತು ವ್ಯಾಖ್ಯಾನಿಸುವ ಜೊತೆಗೆ ಅದನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಕೈಗೊಳ್ಳಬೇಕಿರುವ ಮಹತ್ತರ ಅಂಶಗಳನ್ನು ಪರಾಮರ್ಶಿಸುವ ಅಗತ್ಯವಿದೆ. ಈ ವಿಷಯವಾಗಿ ಈಗಾಗಲೇ ಶಿಕ್ಷಣ ತಜ್ಞರು, ಸಾಮಾಜಿಕ ಅಧ್ಯಯನಕಾರರು, ವಿಜ್ಞಾನಿಗಳು, ರಾಜಕೀಯ ಚಿಂತಕರು, ಆರ್ಥಿಕ ಸಮಾಲೋಚಕರು, ಸುರಕ್ಷಾ ವಿಭಾಗದ ಅಂತರಾಷ್ಟ್ರೀಯ ವಿದ್ವಾಂಸರುಗಳಿಂದ

ರಾಷ್ಟ್ರ ಮಟ್ಟದ ವಿಚಾರಗಳು, ರೂಪು–ರೇಷೆಗಳು ಮಂಡನೆಯಾಗುತ್ತಿವೆ. ಪರ–ವಿರೋಧಿ ಆಲೋಚನೆಗಳು, ವಾದ–ಸರಣಿಗಳನ್ನು ಮತ್ತು ಅಭಿಪ್ರಾಯಗಳನ್ನು ಸಾಮಾಜಿಕ ಜಾಲತಾಣಗಳಿಂದಲೂ ದಾಖಲಿಸಲಾಗುತ್ತಿದೆ.

ಈಗಾಗಲೇ ಜಾರಿಯಾಗಿರುವ ಶಿಕ್ಷಣ ನೀತಿಗಳು ಆಯಾ ಕಾಲದ ಆಶೋತ್ತರಗಳನ್ನು ಇಡೇರಿಸುವಲ್ಲಿ ಸಫಲವಾಗಿದ್ದರೂ ತೀವ್ರವಾಗಿ ಬೆಳೆಯುತ್ತಿರುವ ಜನಸಂಖ್ಯೆ, ಜಾಗತಿಕವಾಗಿ ಆಗುತ್ತಿರುವ ಸಾಮಾಜಿಕ, ಆರ್ಥಿಕ, ಶೈಕ್ಷಣಿಕ, ವೈಚಾರಿಕ ಮತ್ತು ವೈಜ್ಞಾನಿಕ ಬೆಳವಣಿಗೆಗಾಗಿ ನಡೆಯುತ್ತಿರುವ ಹೋರಾಟಗಳು ಮತ್ತೆ ಮತ್ತೆ ಅನೇಕ ಸವಾಲುಗಳನ್ನು ಎದುರಿಸುವಂತಾಗುತ್ತಿದ್ದು ಇಂದಿನ ಅನಿವಾರ್ಯತೆಗೆ ಕಾರಣವೂ ಆಗಿದೆ. ಈ ಎಲ್ಲ ಸಂಗತಿಗಳು ಭಾರತೀಯ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಮುಂದಿರುವ ಸವಾಲುಗಳಾಗಿವೆ. ಪ್ರತಿಯೊಬ್ಬ ಮಗುವಿನ ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಗರಿಷ್ಠ ಮಟ್ಟದಲ್ಲಿ ಬೆಳೆಯಲು ಅವಕಾಶಗಳನ್ನು ಸೃಷ್ಟಿಸುವ ಮತ್ತು ಅವುಗಳನ್ನು ಧನಾತ್ಮಕವಾಗಿ ಬಳಸಿಕೊಳ್ಳಲು ಯೋಜಿಸುವ ಸವಾಲುಗಳೂ ನಮ್ಮ ಶಿಕ್ಷಣದ ಮುಂದಿರುವ ಕಾರಣ ಅವುಗಳನ್ನು ಅತ್ಯಂತ ಜಾಗರೂಕವಾಗಿ ರೂಪಿಸುವ ಅಗತ್ಯವಿದೆ.

ಜಾಗತಿಕವಾಗಿ ಬೆಳೆಯುತ್ತಿರುವ ಇಂದಿನ ಉತ್ಪಾದನಾ ವಲಯಗಳು ಮತ್ತು ಬಳಕೆಯ ಮಾನದಂಡಗಳು ತಂದೊಡ್ಡಿರುವ ಸವಾಲುಗಳು ಒಂದೆಡೆಯಾದರೆ; ಹೊಸ ತಲೆಮಾರಿನ ಜನಾಂಗಗಳೊಂದಿಗೆ ಸಂಘರ್ಷಾತ್ಮಕ ಸ್ಥಿತಿಗೆ ಭೋಗ–ವ್ಯವಸ್ಥೆಯ ತಲುಪಿದೆ. ಅದರಿಂದ ಬಿಡುಗಡೆ ಬಯಸುವ, ಪರ್ಯಾಯ ಮಾನೋ–ಚಿಕಿತ್ಸಕ ವಿಚಾರಗಳನ್ನು ವಿಶ್ವಾಸಾತ್ಮಕ ನೆಲೆಯಲ್ಲಿ ಕಂಡುಕೊಳ್ಳುವ ನಿಟ್ಟಿನಲ್ಲಿಯೂ ಆಲೋಚಿಸಬೇಕಾದುದನ್ನು ಹುಟ್ಟುಹಾಕಲಾಗಿದೆ. ಈ ಎಲ್ಲ ಸಂಗತಿಗಳನ್ನು ಜಾಗತಿಕ ಜಾಲತಾಣಗಳಲ್ಲಿ ದೀರ್ಘವಾದ ಮತ್ತು ಸಮಯೋಚಿತ ಚಿಂತನೆಗಳು, ಚರ್ಚೆಗಳು, ಸವಾಲುಗಳು, ಅವಕಾಗಳು ಎಂಬ ವಿಷಯಗಳನ್ನು ಪ್ರಧಾನವಾಗಿಟ್ಟುಕೊಂಡು ಭಿತ್ತರವಾಗಿದ್ದನ್ನು ಇಲ್ಲಿ ಗಮನಾರ್ಹ ಅಂಶವಾಗಿ ಪರಿಗಣಿಸಲಾಗಿದೆ. ಅವುಗಳಲ್ಲಿ ಪ್ರಮುಖವಾಗಿ **ಡಿ.ಪಿ ಅಗರವಾಲ** ಯುಪಿಎಸ್‌ಸಿ ಯ ಪೂರ್ವ ಚೇರಮನ್ ಎನ್‌ಇಪಿ–2020 ಯನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸುವಲ್ಲಿನ ತೊಡಕುಗಳು ಮತ್ತು ಸವಾಲುಗಳು, **ಡಾ. ಶಶಿ ತಪೂರ** 'ಆನ್ಯೆನ್ ದಿಸ್ಕಷನ್ ಆನ್ ನ್ಯಾಷಿನಲ್ ಎಡ್ಯೂಕೇಷನ್ ಪಾಲಿಸಿ ಎ ಗೇಮ್ ಚೇಂಜರ್ ಫಾರ್ ಹಾಯರ್ ಎಡ್ಯೂಕೇಷನ್'? **ಪ್ರೊ: ಎಸ್ ಪಿ ತ್ಯಾಗರಾಜನ್** ಎನ್‌ಇಪಿ–2020 ಅವಕಾಶಗಳು ಮತ್ತು ಸವಾಲುಗಳು ಕುರಿತ ಕೀ ನೋಟ್ ವಿಚಾರಗಳು, **ಪ್ರೊ: ನೀಲಿಮಾ ಗುಪ್ತಾ** ಅವರು ನ್ಯಾಷನ್ ಸ್ಕಿಲ್ ನೆಟ್ಟರ್ಕ್ ಮೂಲಕ 'ಉನ್ನತ ಶಿಕ್ಷಣದಲ್ಲಿ ಎನ್‌ಇಪಿ–2020 ಅನುಷ್ಠಾನದ ಮಹತ್ವ' ಕುರಿತು ಮಾತನಾಡಿದ ವಿಚಾರಗಳು, 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020' ರ ಅಡಿಯಲ್ಲಿ ಕೌಶಲ್ಯ, ಎಂಟ್ರೆಪ್ರಿನ್ಯೂರ್ಶಿಪ್ ಮತ್ತು ಉದ್ಯೋಗ: ಅವಕಾಶಗಳು ಮತ್ತು ಸವಾಲುಗಳು' **ಡಾ ಸಿ ಆರ್ ರೆನೆ ರಾಬಿನ್** ಪ್ರೊಫೆಸರ್ ಮತ್ತು ಡೀನ್ ಇನ್ನೋವೇಷನ್, ಸಾಯಿರಾಮ್ ಗ್ರೂಪ್ ಆಫ್ ಇನ್ಸ್ಟಿಟ್ಯೂಶನ್. **ಶಿಕ್ಷಣ ಸಚಿವಾಲಯದ ಆಡಳಿತ ವಿಭಾಗದ** 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020' ರ ಕುರಿತು ವೆಬಿನಾರ್ '21 ನೇ ಶತಮಾನದ ಯುವಕರ ಆಕಾಂಕ್ಷೆಗಳನ್ನು ಸಾಕಾರಗೊಳಿಸುವುದು ಹೇಗೆ?' ಎಂಬ ವಿಷಯಗಳ ಕುರಿತು ಭಿತ್ತರಿಸಲಾದ ವಿಚಾರಗಳು. ಭಾರತ ಸರಕಾದ ಶಿಕ್ಷಣ ಸಚಿವಾಲಯವು ಹೊರಡಿಸಿರುವ 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020'. ರ ಕೈಪಿಡಿಯಲ್ಲಿ ಪ್ರಸ್ತಾಪವಾಗಿರುವ ವಿಚಾರಗಳನ್ನು ಆಧರಿಸಿ ಈ ಕೆಲವು ಅನುಕೂಲ ಮತ್ತು ಅನಾನುಕೂಲತೆಗಳನ್ನು ಇಲ್ಲಿ ಚರ್ಚಿಸಲಾಗಿದೆ.

ಒಂದು ಯೋಜನೆ ಅಥವಾ ನೀತಿ ಜಾರಿಗೆ ಬರುವಲ್ಲಿ ಆಯಾ ಕಾಲಘಟ್ಟದ ಅನಿವಾರ್ಯತೆ, ಒತ್ತಡಗಳು, ಬದಲಾದ ರಾಷ್ಟ್ರೀಯ–ಅಂತರಾಷ್ಟ್ರೀಯ ನೀತಿ–ನಿರೂಪಣೆಗಳು, ಬೇಕು–ಬೇಡಗಳ ವಿಚಾರಧಾರೆಗಳು, ವಿದೇಶಾಂಗ ನೀತಿ ನಿಯಮಾವಳಿಗಳು, ಶೈಕ್ಷಣಿಕ, ಸಾಮಾಜಿಕ, ಆರ್ಥಿಕ, ವೈಜ್ಞಾನಿಕ ಪ್ರಗತಿಗಳು, ಪರಸ್ಪರರ ನಂಬಿಕೆ ಅಪನಂಬಿಕೆಗಳು ಹುಟ್ಟು ಹಾಕಿರುವ ಹೊಸ ಹೊಸ ಭರವಸೆಗಳು ಮತ್ತು ಸವಾಲುಗಳನ್ನು ತನ್ನ ಮುಂದಿನ ಪೀಳಿಗೆ ಹೇಗೆ ಎದುರಿಸೀತು? ಎದುರಿಸಬಹುದಾದ ಸಾಧ್ಯತೆಗಳನ್ನು ಗುರುತಿಸುವ ಜವಾಬ್ದಾರಿಗಳನ್ನು ಪ್ರತಿಯೊಬ್ಬ ನಾಯಕ ಆಲೋಚಿಸಿ ಇಂತಹ ಉಪಕ್ರಮಗಳನ್ನು ಗುರುತಿಸುವ ಪ್ರಯತ್ನ ಮತ್ತು ಪ್ರಯೋಗಗಳನ್ನು ಆಯಾ ಸಂದರ್ಭಕ್ಕೆ ಅನುಸಾರವಾಗಿ ರೂಪುಗೊಳಿಸುತ್ತಲೇ ಜಾರಿಗೆ ತರುತ್ತಿರುತ್ತಾರೆ. ಈ ಎಲ್ಲ ಸಂಗತಿಗಳ ಕಾರಣ 'ಭಾರತೀಯ ಶಿಕ್ಷಣ ನೀತಿ' ಈ ಹೊಸ ಸಾಧ್ಯತೆಗಳಿಗೆ ತನ್ನನ್ನು ಬೇಗ ತೆರೆದುಕೊಳ್ಳುವ ಪ್ರಯತ್ನಕ್ಕೆ ಗುರುತಿಸಿಕೊಂಡ ಹಿನ್ನೆಲೆ ಈ ಎಲ್ಲ ಚರ್ಚೆಗಳಿಗೆ ದಾರಿ ಮಾಡಿಕೊಟ್ಟಂತಾಗಿದೆ.

ಅವಕಾಶಗಳು: ಭಾರತೀಯ ಸಾಮಾಜಿಕ ಸ್ಥಿತಿ–ಗತಿಗಳು ಅತ್ಯಂತ ಸೂಕ್ಷ್ಮ ಮತ್ತು ಸಂಕೀರ್ಣ ಸಾಧ್ಯತೆಗಳನ್ನು ಎದುರು ಹಾಕಿಕೊಳ್ಳುವ ಜಾಯಮಾನಕ್ಕೆ ಸಾಕ್ಷಿಯಾದುದೇ ಹೆಚ್ಚು. ಅದರಲ್ಲೂ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಕೇಂದ್ರ ಹಾಗೂ ರಾಜ್ಯಗಳನ್ನು ಒಳಗೊಂಡ 'ಸಮವರ್ತಿ' ಪಟ್ಟಿಯ ಭಾಗವಾಗಿರುವ ಕಾರಣ ಏಕರೂಪದ ಅನುಷ್ಠಾನ ಪದ್ಧತಿಗಳ ಸಾಧ್ಯತೆಗಳನ್ನು ಕ್ಷೀಣಿಸುತ್ತಿವೆ.

ಆದಾಗ್ಯೂ ಈ ವಿಷಯವಾಗಿ ಪಾಲಕರು, ಸಮಾಜ, ರಾಜಕೀಯ ನೇತಾರರು, ಮಕ್ಕಳ ಭವಿಷ್ಯಕ್ಕೆ ಇಂದು ತೆಗೆದುಕೊಳ್ಳುವ ನಿರ್ಧಾರಗಳು ಬಹು ಮುಖ್ಯಪಾತ್ರಗಳನ್ನು ವಹಿಸುತ್ತವೆ. ಅದರಲ್ಲೂ ಜ್ಞಾನದ ಮೂಲ ಭಾಷೆಯಾಗಿರುವುದರಿಂದ ಭಾರತದಂತಹ 'ಬಹುಭಾಷಾ' ಅವಕಾಶಗಳು ಮಗುವಿನ ಸೃಜನ ಮತ್ತು ಸೃಜನೇತರ ವಿಚಾರಗಳನ್ನು ವಿಭಿನ್ನ ಆಯಾಮಗಳಲ್ಲಿ ಕಟ್ಟಿಕೊಳ್ಳಲು ಮತ್ತು ಕಟ್ಟಿಕೊಡಲು ಸಹಾಯಕವಾಗುವ ಕಾರಣ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿ ಈ ಅಂಶವನ್ನು ವಿಶೇಷ ಆಯ್ಕೆಯಾಗಿ ಪರಿಗಣಿಸಿದೆ. ಇದು ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ಕಲೆ, ಸಂಸ್ಕೃತಿ, ವೈಚಾರಿಕತೆ, ತಂತ್ರಜ್ಞಾನ ಬಳಕೆ ಹಾಗೂ ಸಂಯೋಜನೆ ಮತ್ತು ವೈಜ್ಞಾನಿಕತೆಯಂತಹ ಬಹು ಆಯಾಮಗಳಲ್ಲಿ ರೂಪಿಸಲು ಸಹಾಯಕವಾಗಿದೆ.

ಈ ಶಿಕ್ಷಣ ನೀತಿಯ ಪರಿಣಾಮವಾಗಿ ಶಾಲೆಬಿಟ್ಟು ಹೋಗುವವರ ಸಂಖ್ಯೆಯನ್ನು ಗಣನೀಯವಾಗಿ ಕಡಿಮೆ ಮಾಡುವ ಅನೇಕ ವಿಚಾರಗಳು ಪ್ರಸ್ತಾಪವಾಗಿರುವ ಕಾರಣ ವಿದ್ಯಾರ್ಥಿಯ ಆಸಕ್ತಿ ಮನೋಧೋರಣೆಗಳಿಗೆ ಮಾನ್ಯತೆ ದೊರಕಿದೆ. ಇದೊಂದು ವಿದ್ಯಾರ್ಥಿ ಕೇಂದ್ರಿತ ಶೈಕ್ಷಣಿಕ ವಾತಾವರಣದ ಖಾತರಿಪಡಿಸಿಕೊಳ್ಳಲು ಮೊದಲ ಹೆಜ್ಜೆಯಾಗಿದೆ. ಇದರೊಂದಿಗೆ ಕಲಿಕಾ ವಾತಾವರಣವನ್ನು ಸಮಗ್ರವಾದ, ಸಂಕಲಿತವಾದ, ಕ್ರಿಯಾಶೀಲವಾದ, ಚಟುವಟಿಕಾ ಆಧಾರಿತ ಮತ್ತು ಆನಂದದಾಯಕವಾದ ಆಸಕ್ತಿ ಕ್ಷೇತ್ರವಾಗಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಆಗುತ್ತಿರುವ ಬದಲಾವಣೆಗೆ ಅವಕಾಶವನ್ನು ಕಲ್ಪಿಸಿರುವುದು ಆಶಾದಾಯಕ ಬೆಳವಣಿಗೆಯಾಗಿದೆ. ಗುಣಮಟ್ಟದ ಶಾಲಾಕಾಲೇಜುಗಳು, ವಿಶ್ವವಿದ್ಯಾಲಯಗಳನ್ನು ಉನ್ನತೀಕರಣಗೊಳಿಸುವ ಮತ್ತು ಉನ್ನತ ಶಿಕ್ಷಣವನ್ನು ಸಮಗ್ರ ಬೆಳವಣಿಗೆಯೊಂದಿಗೆ ಹೊಸ ಪ್ರಗತಿಪರ ದೃಷ್ಟಿಕೋನವನ್ನು ಬಲವರ್ಧನೆಗೊಳಿಸುವುದಾಗಿದೆ.(ನೋಡಿ: 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020'. ಶಿಕ್ಷಣ ಸಚಿವಾಲಯ ಭಾರತ ಸರಕಾರ, ಪುಟ;48)

ಸಾಂಸ್ಕೃತಿಕ ಪುನಾರಚನೆ ಮತ್ತು ಬಲವರ್ಧನೆ, ಸಮಗ್ರ ದೃಷ್ಟಿಕೋನ ಮತ್ತು ಬಹುಶಿಸ್ತಿಯ ಶಿಕ್ಷಣದತ್ತ ಒಲವು, ಅತ್ಯುತ್ತಮ ಕಲಿಕಾ ವ್ಯವಸ್ಥೆಯೊಂದಿಗೆ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಬೆಂಬಲವಾಗಿ ನಿಲ್ಲುವ ವಾತಾವರಣ, ಸ್ಫೂರ್ತಿದಾಯಕ, ಶಕ್ತಿದಾಯಕ ಮತ್ತು ಸಮರ್ಥವಾದ ಸಿಬ್ಬಂದಿಯನ್ನು ಉನ್ನತ ಶಿಕ್ಷಣಕ್ಕೆ ಸೇರ್ಪಡೆ, ಔದ್ಯೋಗಿಕ ಶಿಕ್ಷಣದ ಮರುವ್ಯಾಖ್ಯಾನ, ಮರುಕಲ್ಪನೆ ಮತ್ತು ಪುನಾರಚನೆ, ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಸಂಶೋಧನಾ ಪ್ರತಿಷ್ಠಾನದ ಮೂಲಕ ಎಲ್ಲಾ ಕ್ಷೇತ್ರಗಳಲ್ಲಿ ಗುಣಾತ್ಮಕ ಶಿಕ್ಷಣದ ಜೊತೆಗೆ ಶೈಕ್ಷಣಿಕ ಸಂಶೋಧನೆಯ ವೇಗವೃದ್ಧಿಗೊಳಿಸುವುದು.

ಕೇಂದ್ರೀಯ ಶಿಕ್ಷಣ ಸಲಹಾ ಮಂಡಳಿಯನ್ನು ಬಲಪಡಿಸುವ, ಹಣಕಾಸಿನ ಹರಿವನ್ನು ಸರಳೀಕರಣಗೊಳಿಸಿ, ಆನ್ಲೈನ್ ಮತ್ತು ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣ ತಂತ್ರಜ್ಞಾನದ ಸಮಾನ ಬಳಕೆ ಮತ್ತು ಭರವಸೆಯೊಂದಿಗೆ ಸರ್ವರಿಗೂ ಕೈಗೆಟುಕಬಲ್ಲ ಮತ್ತು ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣವು ದೊರೆಯುವಂತಾಗಲು ಕ್ರಮವಹಿಸುವುದು ಈ ಶಿಕ್ಷಣ ನೀತಿಯ ಮಹತ್ತರ ನಿಲುವು ಆಗಿದೆ. ಒಂದು ಮಗು/ವಿದ್ಯಾರ್ಥಿ ಅಧ್ಯಯನದ ನಂತರ ಬಹುಶ್ರುತ, ಗೌರವಯುತ ಬದುಕಿಗೆ ಸಾಕ್ಷಿಯಾಗುವುದನ್ನು ಕಟ್ಟಿಕೊಡಲು, ಸ್ಥಳೀಯ, ಪ್ರಾದೇಶಿಕ, ಜಾಗತಿಕವಾಗಿ ಬೆಳೆಯಬಲ್ಲ ಭರವಸೆಗಳನ್ನು ಸಾಮೂಹಿಕ ನೆಲೆಯಲ್ಲಿ ಜಾಗ್ರತಗೊಳಿಸುವುದು. ಸಾಮೂಹಿಕವಾಗಿ ಒಗ್ಗೂಡುವ, ಮುನ್ನಡೆಸುವ, ಇವೆಲ್ಲಕ್ಕಿಂತಲೂ ದೂರದೃಷ್ಟಿಯಿಂದ ಮತ್ತು ನೈತಿಕವಾಗಿ ಉನ್ನತಮಟ್ಟದ ನಾಯಕತ್ವವನ್ನು ಗಳಿಸುವಂತಾಗುವುದು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಹೊಸ ಹೊಸ ಆಯಾಮಗಳಲ್ಲಿ ತಾನು ಪ್ರತಿಪಾದಿಸುವ ಮೌಲ್ಯಗಳನ್ನು, ಪೂರ್ವಿಕರಿಂದ ಬಂದ ಖ್ಯಾತಿಯನ್ನು, ತಾನೇ ಬೆಳೆಸಿಕೊಂಡ ಜನಪ್ರೀಯತೆಯನ್ನು ಉಳಿಸಿಕೊಳ್ಳುವಂತಹ ವಾತಾವರಣವನ್ನು ನಿರ್ಮಾಣ ಮಾಡುವುದು.

ಸಮೂಹದ ಭಾಗವಾಗಿ, ಮುಖ್ಯಸ್ಥನಾಗಿ ಒಬ್ಬ ವಿದ್ಯಾರ್ಥಿಯು ತನ್ನನ್ನು ತಾನು ಮತ್ತು ಸಮೂಹವನ್ನು ಮುನ್ನಡೆಸುವಾಗ ಪಡೆದುಕೊಳ್ಳಬೇಕಾದ, ತೆಗೆದುಕೊಳ್ಳಬೇಕಾದ ಜವಾಬ್ದಾರಿಗಳ ಅರಿವನ್ನು, ಬದಲಾಗುತ್ತಿರುವ ಕಾಲ– ಸಂದರ್ಭಗಳನ್ನು ಅವಕಾಶಗಳನ್ನಾಗಿ ಬಳಸಿಕೊಳ್ಳುವ ಅಂತರ್ದೃಷ್ಟಿಯನ್ನು ಜಾಗೃತಗೊಳಿಸುವುದು. ವೈಯಕ್ತಿಕ ಮತ್ತು ಸಮೂಹದ ಸಾಮರ್ಥ್ಯವನ್ನು ಬಳಸಿಕೊಳ್ಳುವುದು ಆಮೂಲಕ ಹೊಸ ತಲೆಮಾರುಗಳ ಮಾನಸಿಕತೆಯನ್ನು ಬದಲಾಯಿಸುವುದು. ಈ ತರಹದ ಆಲೋಚನೆಗಳು, ತೀರ್ಮಾನಗಳು ಬಹಳ ಸುಲಭದವೇನೂ ಅಲ್ಲವೆಂಬ ಅರಿವಿನೊಂದಿಗೆ ಭರವಸೆಯನ್ನು ಹುಟ್ಟುಹಾಕುವುದಾಗಿದೆ.

ಬಹುಕಾಲದಿಂದ ಬೆಳೆದುಬಂದಿರುವ ಪದ್ಧತಿಗಳು, ಆಲೋಚನಾ ಕ್ರಮಗಳು, ಇರುವ ಬಹುದೊಡ್ಡ ಸಾಮಾಜಿಕ ಜೀವನ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಹೊಸ ಚಲನಶೀಲತೆಯನ್ನು ತರುವುದು ಸುಲಭದ ಕೆಲಸವೂ ಅಲ್ಲ. ಆದರೆ ಇಂತಹ ಕೆಲಸದಲ್ಲಿ

ಯಶಸ್ಸು ಸಾಧಿಸುವುದು, ದೊಡ್ಡ ಗುರಿಯೊಂದಿಗೆ ಸಾಗುವಾಗ ದೃಷ್ಟಿಕೋನವನ್ನು ಬದಲಾಯಿಸದಂತೆ ಜಾಗ್ರತೆವಹಿಸುವುದು. ಬಹಳ ಸೂಕ್ಷ್ಮ ಸಂಗತಿಗಳ ಕಡೆಗೂ ಗಮನ ಹರಿಸುವ ಶಕ್ತಿಯನ್ನು ರೂಪಿಸುವುದು. ಸಮೂಹದಲ್ಲಿನ ಪ್ರತಿಯೊಬ್ಬ ಮಗುವಿನ ಹಕ್ಕುಗಳನ್ನು ಪರಸ್ಪರ ಗೌರವಿಸುವ ಮನೋಭೂಮಿಕೆಯನ್ನು ಸದೃಢಗೊಳಿಸುವುದು. ಇಂತಹ ಅನೇಕ ಸಂಗತಿಗಳನ್ನು ಗಂಭೀರವಾಗಿ ತೆಗೆದುಕೊಳ್ಳುವುದನ್ನು ಈ ಶಿಕ್ಷಣ ನೀತಿಯು ಅಪೇಕ್ಷಿಸುತ್ತದೆ.

ಸವಾಲುಗಳು: ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯನ್ನು ಜಾರಿಗೆ ತರುವಲ್ಲಿ ಯೋಜನೆಗಿಂತಲೂ ಅದನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸುವಲ್ಲಿನ ಸವಾಲುಗಳನ್ನು ಅತ್ಯಂತ ಗಂಭೀರವಾಗಿ ಪರಿಗಣಿಸಬೇಕಾಗುತ್ತದೆ. ಪ್ರಜಾತಂತ್ರ ವ್ಯವಸ್ಥೆಯು ಜನಾಭಿಪ್ರಾಯದ ಭಾಗವಾಗಿ ನಡೆಯುತ್ತಿರುವುದರಿಂದ ಅದಕ್ಕಾಗಿ ಸರಕಾರಗಳು ಅನೇಕ ಜನಪ್ರಿಯ ಯೋಜನೆಗಳನ್ನು ಜಾರಿಗೆ ತರಬೇಕಾದ ಅನಿವಾರ್ಯತೆಗಳಲ್ಲಿ ಸಿಲುಕಿಕೊಂಡಿವೆ. ಹಾಗಾಗಿ ಜನಪ್ರಿಯ ಯೋಜನೆಗಳನ್ನು ಅನುಷ್ಠಾನಗೊಳಿಸಲು ಬೇಕಾದ ಆರ್ಥಿಕ ಆದಾಯಗಳ ಮೂಲಗಳನ್ನು ಗರಿಷ್ಠಮಟ್ಟದಲ್ಲಿ ಬಳಸಿಕೊಂಡು ಇಂತಹ ಹೊಸ ಯೋಜನೆಗೆ ಹಣಕಾಸಿನ ಹಂಚಿಕೆಯನ್ನು ಮಾಡುವುದು ಅಷ್ಟು ಸುಲಭದ ಕೆಲಸವಲ್ಲ. ಅದರಲ್ಲೂ ಹೆಚ್ಚುತ್ತಿರುವ ಜನಸಂಖ್ಯೆಯ ಆಹಾರ, ಆರೋಗ್ಯ, ವಸತಿ, ಸಾರಿಗೆ, ರಕ್ಷಣೆಯಂತಹ ಆದ್ಯತಾ ಕ್ಷೇತ್ರಗಳನ್ನು ಸರಿದೂಗಿಸಿ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ಕಟ್ಟಲು ಹಣಕಾಸಿನ ಹೂಡಿಕೆಯನ್ನು ನಿಗದಿಪಡಿಸುವುದು ಅಷ್ಟೊಂದು ಸಾಮಾನ್ಯ ಸಂಗತಿಯಲ್ಲ. ಆದ್ದರಿಂದ ಈ ಕ್ಷೇತ್ರವನ್ನು ಆದ್ಯತಾ ವಲಯವಾಗಿ ಪರಿಗಣಿಸುವಂತಹ ಮನೋಧೋರಣೆಗಳು ಇನ್ನೂ ಮುನ್ನಲೆಗೆ ಬರಬೇಕಾಗಿದೆ. ಆದ್ದರಿಂದ ಇಂತಹ ಯೋಜನೆಗಳನ್ನು ಜಾರಿಗೆ ತರುವಲ್ಲಿ ಹಣಕಾಸಿನ ಹಂಚಿಕೆ ಮತ್ತು ವಿನಿಯೋಗ ಒಂದು ಸವಾಲಾಗಿ ಕಂಡುಬರುತ್ತದೆ. ಇದರಿಂದಾಗಿ ಯೋಜನೆ ಮತ್ತು ಯೋಜನೇತರ ವೆಚ್ಚಗಳಿಗೆ ಹಣಕಾಸಿನ ಲಭ್ಯತೆ ಬಿಡುಗಡೆಯಾಗದೆ ನಿಗದಿತ ಅವಧಿಗೆ ಕಾರ್ಯಗತಗೊಳ್ಳಲು ಸಾಧ್ಯವಾಗುವುದಿಲ್ಲ.

ಪ್ರಜಾತಂತ್ರ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ನೀತಿ-ನಿರೂಪಣೆಯನ್ನು ಒಗ್ಗೂಡಿಸುವುದು ಅಷ್ಟು ಸುಲಭಸಾಧ್ಯವಾದುದಲ್ಲ. ಇಲ್ಲಿನ ವಿರೋಧಾಭಾಸಗಳು, ವೈಮನಸ್ಸುಗಳು, ಹೊಸತನವನ್ನು ಸ್ವೀಕರಿಸದ ಮನೋಭಾವನೆಗಳು, ಸಂಪ್ರದಾಯದ ಹೆಸರಲ್ಲಿ ಜಡತ್ವವನ್ನು ಅನುಸರಿಸುವ ಆಡಳಿತಾತ್ಮಕ ವಿಚಾರಧಾರೆಗಳು ಇಂತಹ ಹೊಸ ನೀತಿಯನ್ನು ಜಾರಿಗೆ ತರುವಲ್ಲಿ ವಿರೋಧಿಸುವ, ವಿಳಂಬ ನೀತಿಯನ್ನು ಅನುಸರಿಸುವ ಸಾಧ್ಯತೆಗಳೇ ಹೆಚ್ಚು. ಆದ್ದರಿಂದ ಯೋಜನೆಯ ಅನುಷ್ಠಾನ ಸುಲಭ ಸಾಧ್ಯವಾಗದ ವಿಚಾರವಾಗಿದೆ.

ಹಣಕಾಸಿನ ಸಂಪನ್ಮೂಲದೊಂದಿಗೆ ರಾಜಕೀಯ ಇಚ್ಛಾಶಕ್ತಿಯು ಹಾಗೂ ಮಾನವ ಮತ್ತು ಮಾನವೇತರ ಸಂಪನ್ಮೂಲಗಳನ್ನು ಇಷ್ಟೊಂದು ತುರ್ತಾಗಿ ಹೊಂದಿಸುವ, ನಿಯೋಜಿಸುವ ಕಾರ್ಯ ಸುಲಭವಾದುದಲ್ಲ. ಇನ್ನೂ ಗಟ್ಟಿಯಾಗಿ ಉಳಿದಿರುವ ಭಾಷಾವಾರು ವಿರೋಧಗಳು, ಪ್ರಾದೇಶಿಕ ಅಸಮಾನತೆಗಳು, ರಾಜಕೀಯವಾಗಿ ಹಾಗೂ ಸಾಮಾಜಿಕವಾಗಿ ಮತ್ತು ಆರ್ಥಿಕವಾಗಿ ಹಿಂದುಳಿದ ಜನಾಂಗಗಳ ಹಿತಾಸಕ್ತಿಗೆ ಮಾನ್ಯತೆ ಇಲ್ಲವಾಗಿರುವ ಕಾರಣ ಇಂತಹ ಯೋಜನೆಗಳು ಅನೇಕ ವಿರೋಧವನ್ನು ಎದುರಿಸುವಂತಾಗಿದೆ.

'ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯ ತಂತ್ರಜ್ಞಾನವನ್ನು ಅತಿಯಾಗಿ ಅವಲಂಭಿಯಾಗಿದೆ' ಎನ್ನುವ ಭಾವನೆ ಮೂಡುತ್ತಿದೆ. ಅಲ್ಲದೇ ಪ್ರತಿಯೊಂದು ತರಬೇತಿಗೆ ತಂತ್ರಜ್ಞಾನದ ಬಳಕೆ ಅನಿವಾರ್ಯ ಎಂಬಂತೆ ಬಿಂಬಿತವಾಗುತ್ತಿದೆ. ಈ ಕಾರಣದಿಂದಾಗಿ ಅಸಂಖ್ಯಾತ ವಿದ್ಯಾರ್ಥಿ ಸಮೂಹಕ್ಕೆ ಅದರಲ್ಲೂ ನಗರ ಹಾಗೂ ಗ್ರಾಮೀಣ ಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಏಕಕಾಲದಲ್ಲಿಯೇ ನಿಗದಿತ ಮಿತಿಯೊಳಗೆ ತರಬೇತಿ ನೀಡುವ ಸಾಧ್ಯತೆಗಳು ಕ್ಷೀಣವಾಗಿವೆ. ಹಾಗೆಯೇ ನುರಿತ, ತರಬೇತಿ ಪಡೆದ ಕೌಶಲ್ಯಾಧಾರಿತ ಶಿಕ್ಷಕ ಸಿಬ್ಬಂದಿಗಳ ಕೊರತೆಯನ್ನು ಅನುಭವಿಸುತ್ತಿದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಸರಕಾರ ಮತ್ತು ಖಾಸಗಿ ವಲಯದ ಸಹಭಾಗಿತ್ವವು ಇಂತಹ ಮೂಲಭೂತ ಸೌಲಭ್ಯಗಳನ್ನು ಒದಗಿಸುವ ಅವಶ್ಯಕತೆ ಇದೆ.

ಪಠ್ಯಕ್ರಮಗಳ ರಚನೆ, ಅವುಗಳ ಅನುಷ್ಠಾನವು ಇನ್ನೂ ಸವಾಲಿನ ಕಾರ್ಯವಾಗಿದೆ. ಭಾಷಾವಾರು, ಜನಾಂಗವಾರು, ಪ್ರಾದೇಶಿಕವಾರುಗಳ ಆದ್ಯತೆಯ ವಿಷಯಗಳು ಅನೇಕ ವಿವಾದಾತ್ಮಕ ತಿರುವುಗಳನ್ನು ಪಡೆಯುವ ಮೂಲಕ ವಿಳಂಬ ಧೋರಣೆಯ ಮಹತ್ತ ಪಡೆದು ಕಲಿಕಾ ಅವಧಿಯ ನಿಗದಿತ ಅಪೇಕ್ಷಿತ ಸಂಗತಿಗಳ ಬದಲಾಗಿ ಅನಪೇಕ್ಷಿತ ಚರ್ಚೆಗಳನ್ನು ಹುಟ್ಟುಹಾಕಿ ಕಾರ್ಯರೂಪಕ್ಕೆ ಬಾರದ ಸಂದರ್ಭಕ್ಕೆ ಸಾಕ್ಷಿಯಾಗುತ್ತಿದೆ. ಮಗುವಿನ ಸರ್ವತೋಮುಖ ಬೆಳವಣಿಗೆ, ಸಾಮಾಜಿಕ ಸಾಮರಸ್ಯ, ಪರಸ್ಪರ ವಿಶಾಲ ಮನೋಭಾವನೆಯನ್ನು ರೂಢಿಸುವ, ಮೌಲ್ಯಾಧಾರಿತ ನೀತಿಯುಕ್ತ ಪಠ್ಯರಚನೆಗಳು

ವಿರಳವಾಗುತ್ತಿವೆ. ಇದರಿಂದಾಗಿ ಹೊಸ ಹೊಸ ಸವಾಲುಗಳು ತಲೆದೋರುತ್ತಿವೆ. ಮೌಲ್ಯಮಾಪನ ವಿಧಾನಗಳೂ ವ್ಯಕ್ತಿಗತ ಮನೋಧೋರಣೆಯನ್ನು ಹುಟ್ಟುಹಾಕುತ್ತಿವೆ. ಇದರಿಂದಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಭೇದ–ಭಾವನೆಗಳಿಗೆ ಕಾರಣವಾಗಿ ವೈಮನಸ್ಸಿನ ಕಲಿಕಾ ಪರಿಸರ ರೂಪುಗೊಳ್ಳಲು ಪ್ರಾರಂಭವಾಗಿದೆ. ಇದರಿಂದಾಗಿ ಮೌಲ್ಯಮಾಪನ ಇಂದು ಅತ್ಯಂತ ಸವಾಲಿನ ಕಾರ್ಯವಾಗುತ್ತಿದೆ. ಇಂತಹ ಅನೇಕ ಸವಾಲುಗಳನ್ನು ಆಧುನಿಕ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ಎದುರಿಸುತ್ತಿದೆ. ಆದರೂ ಹೊಸ ಭರವಸೆಗಳನ್ನು ಹುಟ್ಟುಹಾಕುತ್ತಾ, ಬರಬಹುದಾದ ಸವಾಲುಗಳನ್ನು ಸಮರ್ಥವಾಗಿ ಎದುರಿಸುವ ಸಾಮರ್ಥ್ಯ ಭಾರತೀಯ ಸಮಾಜ ಮತ್ತು ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ ಕಟ್ಟಿಕೊಳ್ಳುವಲ್ಲಿ ಸಾಧ್ಯವಾಗುವ ಪ್ರಯತ್ನವೇ ಈ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿ–2020ರ ಆಶಯವಾಗಿದೆ.

ಒಟ್ಟಾರೆಯಾಗಿ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿಯ ಮಗುವಿನ ಸರ್ವಾಂಗೀಣ ಬದುಕಿನ ಕ್ಷಣಗಳನ್ನು ಆಸ್ವಾಧಿಸುವ, ಪರಿಸರಾತ್ಮಕವಾಗಿ, ಔದ್ಯಮಿಕವಾಗಿ ಆರೋಗ್ಯಯುತವಾದ ಅಭಿವೃದ್ಧಿಗೆ ತನ್ನನ್ನು ಒಡ್ಡಿಕೊಳ್ಳುವ, ಗ್ರಾಮೀಣಾಭಿವೃದ್ಧಿಗೆ ಒತ್ತು ನೀಡುವ ಮನೋಭಾವನೆಯ ಕಲಿಯುವ ಮನಸ್ಸಿನಲ್ಲಿ ನೆಲೆಗೊಳ್ಳುವಂತೆ ಮಾಡುವುದಾಗಿದೆ. ಅಲ್ಲದೇ ತನ್ನ ಸುತ್ತಲ ಜಗತ್ತಿಗೆ ಸ್ಪಂದಿಸುವ ಮತ್ತು ಅಂತಹ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ತೊಡಗಿಸಿಕೊಂಡೂ ತನ್ನ ವೈಯಕ್ತಿಕ ಬದುಕನ್ನು ಮುಖಾಮುಖಿಯಾಗಿಸುವ ಕಲೆ, ಜಾಣ್ಮೆಯನ್ನು ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ರೂಪಿಸುವ ಜವಾಬ್ದಾರಿಯನ್ನು ಹೊಂದಿದೆ. ಇದರೊಂದಿಗೆ ಮಗು ತನ್ನೊಳಗಿನ ಸಾಮರ್ಥ್ಯವನ್ನು ಗುರುತಿಸಿಕೊಂಡು ಅಸಾಧರಣ ವ್ಯಕ್ತಿಯಾಗಿ ರೂಪುಗೊಳ್ಳುವಲ್ಲಿ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಅತ್ಯಂತ ಮಹತ್ವದ ಪಾತ್ರವನ್ನು ವಹಿಸಬೇಕಾಗಿದೆ.

ಪರಾಮರ್ಶನ ಗ್ರಂಥಗಳು:

1. 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020'.
2. ದಿನಪತ್ರಿಕೆಗಳ ಲೇಖನಗಳು.
3. ಜಾಲತಾಣಗಳಲ್ಲಿನ ವಿಚಾರ ಸರಣಿಗಳು.

"ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ (ಕ್ರಿ.ಶ.450 ರಿಂದ ಕ್ರಿ.ಶ.1565ವರೆಗೆ) ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ (2020) ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳ ಅಧ್ಯಯನ"

ಕೋಟೋಜಿರಾವ್ ಆರ್.

ಸಂಶೋಧನಾರ್ಥಿ, ಶಿಕ್ಷಣ ವಿಭಾಗ, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಂಕರಘಟ್ಟ.

ಪ್ರೊ.ಎಸ್.ಎಸ್.ಪಾಟೀಲ್,

ಪ್ರಾಧ್ಯಾಪಕರು, ಶಿಕ್ಷಣ ವಿಭಾಗ, ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾಲಯ, ಶಂಕರಘಟ್ಟ.

ಲೇಖನ ಸಾರ ಸಂಗ್ರಹ

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನದಲ್ಲಿ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕಿನ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಕುರಿತ ಅನ್ವೇಷಣಾತ್ಮಕ ಅಧ್ಯಯನ ಮಾಡುವುದಾಗಿದೆ. (ಕ್ರಿ.ಶ.450 ರಿಂದ ಕ್ರಿ.ಶ.1565 ವರೆಗೆ). ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಾದ ತಾಳಗುಂದ, ಬಳ್ಳಿಗಾವಿ, ಬಂದಳಿಕೆ, ಬೇಗೂರು, ಜಂಬೂರು, ಚಿಕ್ಕಮಾಗಡಿ, ಅಗ್ರಹಾರ ಮುಚಡಿ, ಸಂಡ ಹೀಗೆ ಒಟ್ಟು ಪ್ರಮುಖ ಎಂಟು ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿ ಲಭ್ಯವಿರುವ ಶಾಸನಗಳನ್ನು ಆಧರಿಸಿ ಈ ಸಂಶೋಧನೆಯನ್ನು ಕೈಗೊಳ್ಳಲಾಗಿದೆ.

ಭಾರತದಲ್ಲಿ ಆದಿಕಾಲದಿಂದಲೂ ನಡೆದುಕೊಂಡು ಬಂದ ಗುರುಕುಲ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ಜಗತ್ತಿನ ಅತ್ಯಂತ ಪುರಾತನ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಗಳಲ್ಲಿ ಒಂದಾಗಿದೆ. ವಿಶಾಲ ಹಾಗೂ ವೈವಿಧ್ಯಮಯ ವಿಷಯಗಳ ಅಧ್ಯಯಗಳು ಇಲ್ಲಿ ನಿರಂತರವಾಗಿ ನಡೆಯುತ್ತಿದ್ದವು. ವೇದ, ವೇದಾಂಗ, ದರ್ಶನ, ಪುರಾಣ, ಮೀಮಾಂಸೆ, ವ್ಯಾಕರಣ, ಸ್ಮೃತಿ, ಕಲೆ, ಸಂಗೀತ, ಮೊದಲಾದ ಉನ್ನತ ವಿಷಯಗಳ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣ ಹಾಗೂ ಪರಿಪೂರ್ಣ ಮಾನವ ನಿರ್ಮಾಣ ಅಂದಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ಅಂಶವಾಗಿತ್ತು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಭಾರತ ಸರ್ಕಾರವು 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020' ಪ್ರಸ್ತುತ ಒಟ್ಟು ಶಿಕ್ಷಣದ ಗುಣಮಟ್ಟವನ್ನು ಸುಧಾರಿಸುವುದು, ಭಾರತವನ್ನು ಜಾಗತಿಕ ಶಿಕ್ಷಣ ಕೇಂದ್ರವಾಗಿ ಗುರುತಿಸಿಕೊಳ್ಳುವುದು ಮತ್ತು ಹೆಚ್ಚು ಸಬಲೀಕರಣಗೊಳಿಸುವುದು ಇದರ ಉದ್ದೇಶವಾಗಿದೆ.

ಹಿಂದಿನ ಭಾರತೀಯ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ಅಂಶಗಳು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮುಂದುವರಿಕೆಯಂತೆಯೇ ಆಗಿದ್ದು, ಆಧುನಿಕ ಶಿಕ್ಷಣದಲ್ಲಿ ಬೋಧಿಸಲಾಗುವ ಎಲ್ಲ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಗಳನ್ನು ಗುರುಕುಲ ಶಿಕ್ಷಣದಲ್ಲಿ ನೀಡಲಾಗುತ್ತಿತ್ತು. ಅದರಂತೆ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯ ಮುಂದುವರಿಕೆಯನ್ನು, ಇಂದಿನ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯಲ್ಲಿ ಕಾಣಬಹುದಾಗಿದೆ. ಈ ಅಧ್ಯಯನವು ಭವಿಷ್ಯದ ದಿನಗಳಿಗೆ ಮಹತ್ವಪೂರ್ಣವಾದ ದಾಖಲೆಯಾಗಲಿದ್ದು, ಭವಿಷ್ಯತ್ತಿನ ಶೈಕ್ಷಣಿಕ ವಿಚಾರಧಾರೆಗಳನ್ನು ರೂಪಿಸುವಿಕೆಯಲ್ಲಿ ಮಹತ್ತದ ಮಾರ್ಗದರ್ಶಿಯಾಗಲಿದೆ.

ಪಾರಿಭಾಷಿಕ ಪದಗಳು : ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶ, ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳು, ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ, ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು.

ಪೀಠಿಕೆ

"ಆಧುನಿಕ ಶಿಕ್ಷಣದೊಂದಿಗೆ ಪ್ರಾಚೀನ ಜ್ಞಾನದ ಮನಸ್ಸುಗಳನ್ನು ಸಂಯೋಜಿಸಬೇಕು" ಎಂದು ಆಧ್ಯಾತ್ಮಿಕ ಗುರು ದಲೈಲಾಮಾರವರ ಅಭಿಮತ. ನಾವುಗಳು ಮಾನವರ ಅಂತರ್ಗತ ಏಕತೆಗೆ ವಿರುದ್ಧವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತಿದೆ. ದೈಹಿಕ ಮತ್ತು ಭಾವನಾತ್ಮಕ ನೈರ್ಮಲ್ಯಕ್ಕೆ ಸಮಾನ ಒತ್ತು ನೀಡುವ ಹೊಸ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯೊಂದಿಗೆ ಇದನ್ನು ಎದುರಿಸಬಹುದು ಎಂದು ಅವರು ಒತ್ತಿ ಹೇಳಿದ್ದಾರೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಭಾರತದ ಪ್ರಾಚೀನ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳು ಉನ್ನತ ಶಿಕ್ಷಣ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ವಿನಿಮಯ ಕೇಂದ್ರಗಳಾಗಿದ್ದು, ಈ ವಿದ್ಯಾಕೇಂದ್ರಗಳು ಜ್ಞಾನ ಮತ್ತು ಬುದ್ಧಿವಂತಿಕೆಯನ್ನು ಹುಡುಕುವ ಅದರ ಅಂತ್ಯವಿಲ್ಲದ ಚಾಲನೆಯಾಗಿದೆ. ಸತ್ಯಗಳನ್ನು ತಲುಪಲು ಪ್ರಶ್ನಿಸುವ ಮತ್ತು ಚರ್ಚೆ ಮಾಡುವ ಅವುಗಳ ಸಾಮರ್ಥ್ಯವು ಅತ್ಯುನ್ನತವಾಗಿದೆ. ವಿಶ್ವದ ಅತ್ಯಂತ ಹಳೆಯ ವಿಶ್ವವಿದ್ಯಾಲಯಗಳಿಗೆ ನೆಲೆಯಾಗಿರುವ ಭಾರತದಲ್ಲಿ, ಕಲೆ ಮತ್ತು ಕಲಿಕೆಯ ಸುಸ್ಥಾಪಿತ ಸಂಸ್ಥೆಗಳಿದ್ದವು ಎಂಬುದು ಹೆಮ್ಮೆಯ ಸಂಗತಿ.

ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಎಲ್ಲಾ ಫಲಿತಗಳಿಗೆ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಪರಿಕಲ್ಪನೆಗಳೇ ಮೂಲಾಧಾರವಾಗಿದೆ. ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯ ಮೂಲಭೂತ ಅಂಶಗಳು ಹೊಸ ರಾಷ್ಟ್ರೀಯ

ಶಿಕ್ಷಣ ನೀತಿಯ ಮುಂದುವರಿಕೆಯಂತೆಯೇ ನಮಗೆ ಗೋಚರಿಸುತ್ತದೆ. ಪ್ರಸ್ತುತ ಆಧುನಿಕ ಶಿಕ್ಷಣದಲ್ಲಿ ಬೋಧಿಸಲಾಗುವ ಎಲ್ಲಾ ಶಿಕ್ಷಣವನ್ನು ಗುರುಕುಲ ಶಿಕ್ಷಣದಲ್ಲಿ ನೀಡಲಾಗುತ್ತಿತ್ತು. ಇಲ್ಲಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳು ಶಿಕ್ಷಣ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ವಿನಿಮಯ, ಜ್ಞಾನ ಮತ್ತು ಸತ್ಯವನ್ನು ಹುಡುಕುವ ಕೇಂದ್ರಗಳಾಗಿದ್ದವು. ವಿದ್ಯಾರ್ಥಿಗಳ ಜ್ಞಾನ ಮತ್ತು ಸತ್ಯದ ಅನ್ವೇಷಣೆಯಲ್ಲಿ ಮಾರ್ಗದರ್ಶಿಯಾಗಿದ್ದವು.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿ ಮಾನವೀಯತೆಯ ಕಲಿಕೆ. ಸಚ್ಚಾರಿತ್ರ್ಯದ ಬೆಳವಣಿಗೆ. ದೈಹಿಕ, ಮಾನಸಿಕ ಹಾಗೂ ಆಧ್ಯಾತ್ಮಿಕ ಪ್ರಗತಿಗೆ ಇಂಬು ನೀಡುವ ಶಿಕ್ಷಣ ರೂಪಗೊಂಡಿತ್ತು. ಬದಲಾಗುತ್ತಿರುವ ಸಮಾಜದಲ್ಲಿನ ಸವಾಲುಗಳಿಗೆ ಸ್ಪಂದಿಸುತ್ತ ಉತ್ಕೃಷ್ಟ ಗುಣಮಟ್ಟದ ಕಡೆಗೆ ಅಂದಿನ ಶಿಕ್ಷಣ ಸಾಗುತ್ತಿತ್ತು. ಇಂದಿನ ಜ್ಞಾನವೆಂಬ ಬೆಳಕನ್ನು ಹೊರ ಜಗತ್ತಿಗೆ ತೋರುವ ಕೆಲಸ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣದ ಮೂಲಕ ಸಾಗಬೇಕಿದೆ. ಶ್ರೇಷ್ಠ ಶಿಕ್ಷಣದ ಮೂಲಕ ಯೋಗ್ಯ ಸಮಾಜ ನಿರ್ಮಾಣವಾಗಬೇಕೆಂಬುದು ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ತ್ವಗಳ ಆಶಯವಾಗಿತ್ತು.

ಅಧ್ಯಯನದ ಪ್ರಾಮುಖ್ಯತೆ :

ಅರೆಮಲೆನಾಡಿನ ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣ ಪದ್ಧತಿಯು ಶ್ರೇಷ್ಠಮಟ್ಟದ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆಯ ಭಾಗವಾಗಿತ್ತು. ಶಿಕಾರಿಪುರ ಅರೆಮಲೆನಾಡಿನ ಭಾಗವು ಕರ್ನಾಟಕದ ಜೊತೆಗೆ ಭಾರತದ ಸಂಸ್ಕೃತಿಯನ್ನು ರೂಪಿಸುವಲ್ಲಿ ಮಹತ್ವಪೂರ್ಣವಾದ ಕೊಡುಗೆಯನ್ನು ನೀಡಿದೆ. ನಳಂದ, ತಕ್ಷಶಿಲಾ, ವಿಕ್ರಮಶಿಲಾ ಹಾಗೂ ವಲ್ಲಭಿ ವಿದ್ಯಾಕೇಂದ್ರಗಳಂತೆ ಕರ್ನಾಟಕದ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ವಿದ್ಯಾಕೇಂದ್ರಗಳ ಇತಿಹಾಸವೂ ಗಮನಾರ್ಹವಾಗಿದೆ. ಇಂತಹ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಲಾಶಾಸನಗಳ ಮೂಲಕ ಸಮಗ್ರ ಮಾಹಿತಿಯನ್ನು ಸಂಗ್ರಹಿಸಿ, ವಿಶ್ಲೇಷಿಸುವ ಸದುದ್ದೇಶವನ್ನು ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ಹೊಂದಿದೆ.

ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆಯ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕು ಅರೆಮಲೆನಾಡಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳಾದ ತಾಳಗುಂದ, ಬಳ್ಳಿಗಾವಿ, ಬಂದಳಿಕೆ, ಬೇಗೂರು, ಜಂಬೂರು, ಚಿಕ್ಕಮಾಗಡಿ, ಅಗ್ರಹಾರ ಮುಚಡಿ, ಸಂಡ ಮೊದಲಾದ ಸ್ಥಳಗಳು ಪ್ರಮುಖ ವಿದ್ಯಾಕೇಂದ್ರಗಳಾಗಿದ್ದು, ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ ಪ್ರಸ್ತುತ ಅಧ್ಯಯನವು ತುಂಬಾ ಅವಶ್ಯವೆನಿಸಿದೆ.

ಪ್ರಸ್ತುತ ಲೇಖನವು ಅರೆಮಲೆನಾಡಿನ ವಿದ್ಯಾಕೇಂದ್ರಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಾಥಮಿಕ ಹಾಗೂ ದ್ವಿತೀಯ ಸಂಪನ್ಮೂಲಗಳನ್ನು ಆಧಾರಿಸಿ ಅಂದಿನ ಶಿಕ್ಷಣದ ಪಠ್ಯಕ್ರಮದ ಸಮಗ್ರ ಮಾಹಿತಿಗಳನ್ನು ಕಲೆಹಾಕಿ, ಸತ್ಯವನ್ನು ಹುಡುಕುವ ಉದ್ದೇಶವನ್ನು ಇಟ್ಟುಕೊಂಡು ಸಂಶೋಧನೆಯನ್ನು ಕೈಕೊಳ್ಳಲಾಗಿದೆ.

ಅಧ್ಯಯನದ ಉದ್ದೇಶಗಳು :

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಕುರಿತು ಅಧ್ಯಯನ ಮಾಡುವುದು.

ಅಧ್ಯಯನದಲ್ಲಿ ಬಳಸಲಾದ ಚಲಕಗಳು

ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ತ್ವಗಳು, ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ.

ಅಧ್ಯಯನದ ವಿಧಾನ

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು
ಕುರಿತು ಶೋಧಮಾಡುವುದಾಗಿದ್ದು "ಇತಿಹಾಸಿಕ ವಿಧಾನ"ವನ್ನು ಅಳವಡಿಸಿಕೊಂಡು ಅಧ್ಯಯನ ಮಾಡಲಾಗಿದೆ.

ಸಂಶೋಧನೆಯ ನಮೂನೆ

ಪ್ರಸ್ತುತ ಸಂಶೋಧನೆಗೆ ಸಂಭನೀಯ ಪ್ರತಿದರ್ಶ ವಿಧಾನದ ತಂತ್ರಗಳಲ್ಲಿ ಒಂದಾದ "ಉದ್ದೇಶಿತ ಪ್ರತಿದರ್ಶ ವಿಧಾನ" ವನ್ನು(Purposive Sampling Method) ಬಳಸಿಕೊಂಡಿದೆ.

ದತ್ತಾಂಶಗಳ ಸಂಗ್ರಹಣೆಗಾಗಿ ಬಳಸಿದ ಸಾಧನಗಳು

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಕುರಿತು ಅನ್ವೇಷಣಾತ್ಮಕ ಅಧ್ಯಯನಕ್ಕೆ (ಕ್ರಿ.ಶ.450 ರಿಂದ ಕ್ರಿ.ಶ.1565) ಸಂಬಂಧಿಸಿದಂತೆ ಐತಿಹಾಸಿಕ ವಿಧಾನದ ಮೂಲಕ ಪ್ರಾಥಮಿಕ ಹಾಗೂ ದ್ವಿತೀಯ ಮೂಲಧಾರಗಳನ್ನು ಆಧರಿಸಿ ಶೋಧ ಮಾಡಲಾಗಿದ್ದು, ಈ ಕೆಳಕಾಣಿಸಿದ ಸಾಧನಗಳನ್ನು ಬಳಸಿಕೊಳ್ಳಲಾಗಿದೆ.

- ಕ್ಷೇತ್ರಭೇಟಿ.
- ಶಾಸನಗಳ ವೈಜ್ಞಾನಿಕ ವಿಧಾನ ಬಳಸಿ ಪಾಠ ತೆಗೆಯುವಿಕೆ.
- ಶಾಸನಗಳ ಪಡಿಯಚ್ಚು ತೆಗೆಯುವಿಕೆಯ ಸಾಧನಗಳು.
- ಶಾಸನಗಳ ಅಳತೆಗಾಗಿ ಅಳತೆ ಟೇಪು.
- ಶಾಸನಗಳ ಪಾಠಗಳನ್ನು ಓದಲು ಭೂತಗನ್ನಡಿ.
- ದತ್ತಾಂಶಗಳ ಸಂಗ್ರಹಣೆ ಹಾಗೂ ವಿಶ್ಲೇಷಣೆ.
- ಸಂಬಂಧಿ ಸಾಹಿತ್ಯದ ಅವಲೋಕನ.

ದತ್ತಾಂಶಗಳ ವಿಶ್ಲೇಷಣೆ

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನಕ್ಕಾಗಿ "ವಿವರಣಾತ್ಮಕ ವಿಶ್ಲೇಷಣಾ ವಿಧಾನ"ವನ್ನು ಬಳಸಿಕೊಂಡು, ದತ್ತಾಂಶಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಲಾಗಿದೆ.

ದತ್ತಾಂಶಗಳ ವಿಶ್ಲೇಷಣೆ ಮತ್ತು ಫಲಿತಾಂಶದ ಅರ್ಥೈಸುವಿಕೆ :

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಆಯ್ದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಗಳ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಗಳನ್ನು ಈ ಕೆಳಗಿನಂತೆ ವಿಶ್ಲೇಷಿಸಬಹುದು.

01. ಬಹುಶಿಸ್ತೀಯ ಮತ್ತು ಸಮಗ್ರ ಶಿಕ್ಷಣ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಾದ ತಾಳಗುಂದ, ಬಳ್ಳಿಗಾವಿ, ಬಂದಳಿಕೆ, ಬೇಗೂರು, ಜಂಬೂರು, ಚಿಕ್ಕಮಾಗಡಿ, ಅಗ್ರಹಾರ ಮುಚಡಿ, ಸಂಡ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಗುರುಕುಲ ಶಿಕ್ಷಣದಂತೆ ಉತ್ಕೃಷ್ಟ ಪಠ್ಯಧಾರಿತವಾದ ಬಹುಶಿಸ್ತೀಯ ಮತ್ತು ಸಮಗ್ರ ಶಿಕ್ಷಣವನ್ನು ನೀಡಲಾಗುತ್ತಿತ್ತು.

ಇಲ್ಲಿ ಚತುರ್ವೇದಗಳು, ವೇದಾಂತಗಳು, ಆರು ದರ್ಶನಗಳು, ಸ್ಮೃತಿ, ಪುರಾಣ, ಕಾವ್ಯ, ಅಲಂಕಾರ, ವ್ಯಾಕರಣ, ಛಂದಸ್ಸುಗಳು, ವಾಸ್ತುಕಲೆ, ಮೀಮಾಂಸೆ, ಶಾಸ್ತ್ರಗಳು, ಷಟ್ತರ್ಕ, ಪಂಚವ್ಯಾಕರಣ, ನಾಟಕಶಾಸ್ತ್ರ, ಶಬ್ದಶಾಸ್ತ್ರ, ರೂಪಾವತಾರ ಶಾಸ್ತ್ರಗಳು, ನ್ಯಾಯಶಾಸ್ತ್ರ, ಕನ್ನಡ ಭಾಷೆ ಮತ್ತು ಬಾಲಶಿಕ್ಷೆಯ ಶಾಸ್ತ್ರ, ತರ್ಕಾದಿಶಾಸ್ತ್ರ, ಗಮಕ ವ್ಯಾಖ್ಯಾನಗಳು, ಕೌಮಾರ, ಪಾಣಿನೀಯ, ಶಾಕಟಾಯನ, ಶಬ್ದನುಶಾಸನ ಹಾಗೂ ಬೇರೆ ವ್ಯಾಕರಣ ಗ್ರಂಥಗಳನ್ನು ಕುರಿತು, ನ್ಯಾಯ, ವೈಶೇಷಿಕ, ಮೀಮಾಂಸಾ, ಸಾಂಖ್ಯ, ಬೌದ್ಧ, ಮುಂತಾದ ತತ್ವಶಾಸ್ತ್ರದ ಆರು ಪದ್ಧತಿಗಳನ್ನು ಕುರಿತು ಭಾಷ್ಯಗಳನ್ನು ರಚಿಸುವ ತಾಣ. ಲಾಕುಳ ಸಿದ್ಧಾಂತ ಹಾಗೂ ಪಾತಂಜಲ ಅಲ್ಲದೆ ಬೇರೆ ಯೋಗಶಾಸ್ತ್ರಗಳಿಗೆ ಭಾಷ್ಯಗಳನ್ನು ರಚಿಸಲಾಗುತ್ತಿತ್ತು. ಕಾವ್ಯರಚನೆ, ನಾಟಕ, ಲಘು ಪ್ರಹಸನಗಳು ಜೊತೆಗೆ ಅರವತ್ತೂಲ್ಕು ವಿದ್ಯೆಗಳಲ್ಲಿ ಪಾಂಡಿತ್ಯವನ್ನು ಹೊಂದಿ, ಅಧ್ಯಯನ ಅಧ್ಯಾಪನದಲ್ಲಿ ತೊಡಗಿದ್ದರು. ಇಂತಹ ಬಹುಶಿಸ್ತೀಯ ಮತ್ತು ಸಮಗ್ರ ಶಿಕ್ಷಣವನ್ನು ಇಂದಿನ 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020' ರಲ್ಲೂ ಕಾಣಬಹುದಾಗಿದ್ದು, ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಗುರುತಿಸಬಹುದಾಗಿದೆ.

02. ಸೃಜನಶೀಲತೆ ಹಾಗೂ ವಿಮಶಾತ್ಮಕ ಚಿಂತನೆ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಪಠ್ಯಕ್ರಮಗಳಲ್ಲಿ ಸೃಜನಶೀಲತೆ ಹಾಗೂ ವಿಮಶಾತ್ಮಕ ಚಿಂತನೆಯ ವಿಕಾಸಕ್ಕೆ ಹೆಚ್ಚು ಒತ್ತನ್ನು ನೀಡಲಾಗಿತ್ತು. ಅರವತ್ತುನಾಲ್ಕು ವಿದ್ಯೆಗಳಲ್ಲಿ ಪಾಂಡಿತ್ಯವನ್ನು ಹೊಂದಿ, ಅಧ್ಯಯನ ಅಧ್ಯಾಪನದಲ್ಲಿ ತೊಡಗಿದ್ದ ಶಿಕ್ಷಕರಿಂದ ಇಲ್ಲಿ ಕಾವ್ಯರಚನೆ, ನಾಟಕ, ಲಘು ಪ್ರಹಸನಗಳು, ಪುರಾಣ ಹಾಗೂ ಹಲವು ಬಗೆಯ ಅಧ್ಯಯನ ನಡೆಯುತ್ತಿತ್ತು. ವೃತ್ತಿಪರ ಕಥಾಕಥನಕಾರರು, ಗಾಯಕರು, ಸಂಗೀತಗಾರರು, ಹಾಡುವ ಕವಿಗಳು, ಆಟಗಾರರು, ವಿಕಟ ಕವಿಗಳ ತಾಣವಾಗಿದ್ದ ಈ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಸೃಜನಶೀಲತೆ ಕಲಿಕೆಗೆ ಹೆಚ್ಚು ಅವಕಾಶಗಳಿದ್ದವು. ಡಾ.ಎಂ.ಚಿದಾನಂದಮೂರ್ತಿಯವರು ಬಂದಳಿಕೆಯ ಕೇತಲದೇವಿಯು 'ಅನೇಕ ದೇಶಭಾಷಾ ಸಂಗೀತ ವಿದ್ಯಾಧರಿ' ಎಂದು ಇವಳು ಅನೇಕ ದೇಶಭಾಷೆಗಳ ಸಂಗೀತದಲ್ಲಿ ಪರಿಣತಿಯನ್ನು ಪಡೆದಿದ್ದಳು. ಅವಳನ್ನು ಸಕಳಕಳಾಧರಿಯೆಂದೂ, ಅಭಿನವ ಸರಸ್ವತಿಯೆಂದೂ ಪ್ರಶಂಸಿಲಾಗಿದೆ" ಎಂದು ಅಭಿಪ್ರಾಯಪಟ್ಟಿದ್ದಾರೆ.

ಇಲ್ಲಿ ಮೌಖಿಕವಾಗಿ ಶಿಕ್ಷಕ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ಮಧ್ಯ ಸಂವಾದ, ಚರ್ಚೆ, ಪ್ರಶ್ನೋತ್ತರ ನಡೆಯುತ್ತಿದ್ದವು. ಋಗ್ವೇದ, ಯಜುರ್ವೇದ, ಸಾಮವೇದ, ವೇದಾಂತ, ವ್ಯಾಕರಣ, ಮೀಮಾಂಸೆ ಶಾಸ್ತ್ರ ಷಟ್ಚಕ್ರ್ಮ ಸ್ಮೃತಿ ಪುರಾಣ ಕಾವ್ಯ ನಾಟಕ ಶಾಸ್ತ್ರ ನ್ಯಾಯಶಾಸ್ತ್ರ ಮೊದಲಾದ ವಿಷಯಗಳನ್ನು ಮೌಖಿಕವಾಗಿಯೇ ಅಭ್ಯಾಸ ಮಾಡಿಸಲಾಗುತ್ತಿತ್ತು. "ಬಾಲಶಿಕ್ಷೆಯ ಶಾಸ್ತ್ರದವರು ಪುರಾಣಂ ಪೇಳುವರ್" ಎಂಬ ಉಲ್ಲೇಖಿದಲ್ಲಿ ಪುರಾಣಗಳು ಮಕ್ಕಳಿಗೆ ಕಥೆ ಹೇಳಲು ಬಳಸುತ್ತಿದ್ದ ಪಠ್ಯಗಳೆನಿಸುತ್ತವೆ. ಇವುಗಳ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ವಿಮಶಾತ್ಮಕ ಚಿಂತನೆಗಳನ್ನು ಮೂಡಿಸಲಾಗುತ್ತಿತ್ತು ಹಾಗೂ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

03. ವೈವಿಧ್ಯತೆಗೆ ಗೌರವ ಹಾಗೂ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಭಾಷೆ ಮತ್ತು ಪಠ್ಯಗಳ ವೈವಿಧ್ಯತೆಯನ್ನು ಗೌರವಿಸುವ ಹಾಗೂ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣ ನೀಡುವ ಪರಿಕಲ್ಪನೆ ಇತ್ತು. ಇಲ್ಲಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಸಂಸ್ಕೃತ ಪಾಠಶಾಲೆ ಮಾತ್ರವಲ್ಲ ಕನ್ನಡದ ಅಧ್ಯಯನವೂ; ವೇದ, ಪುರಾಣ, ನೀತಿಶಾಸ್ತ್ರ, ತರ್ಕ, ಆಗಮ, ಕಾವ್ಯ, ನಾಟಕ, ಕಥಾ, ಸ್ಮೃತಿ ಮೊದಲಾದ ವೈವಿಧ್ಯತೆಯನ್ನು ಒಳಗೊಂಡ ಪಾಂಡಿತ್ಯಪೂರ್ಣ ಶಿಕ್ಷಣವನ್ನು ನೀಡಲಾಗುತ್ತಿತ್ತು.

ಇಲ್ಲಿನ ಬೇಗೂರಿನ ವಿದ್ಯಾಕೇಂದ್ರದ ವಿದ್ಯಾರ್ಥಿ ಮಾದಿಮಯ್ಯನನ್ನು ಶಾಸನವು ಸಕಲ ಕಲಕಲಾಪದಲ್ಲಿ, ಬಹುವಿದ್ಯೆ ವಿಚಾರದಲ್ಲಿ, ತತ್ವ, ನಯ, ಕಾವ್ಯ, ಪುರಾಣ, ನಾಟಕ ಮೊದಲಾದವುಗಳಲ್ಲಿ ಶ್ರೇಷ್ಠನಾಗಿದ್ದನು ಎಂಬುದು ಇದು ಅವನು ಕಲಿತ ವಿದ್ವತ್ತಿನ ಪ್ರತೀಕವಾಗಿದೆ ಹಾಗೂ ಬಂದಳಿಕೆಯ ಕ್ರಿ.ಶ.1163ರ 142ನೇ ಶಾಸನವು "ಶ್ರೀರಮಣನಾದ ಮಾಚಯ್ಯನು ಧೀರನಾಗಿ, ತಳವಾರಿಕೆಯಿಂದ ಸುಂಕದ ಅಧಿಕಾರಿಯಾಗಿ, ನಂತರ ಅಧಿಕಾರವನ್ನು ವಿಸ್ತರಿಸಿ ಅಧಿಕಾರಿ ಎಂಬಂತೆ ಹೆಸರಾದನು" ಎಂದು, ಸಂಶೋಧಕರಾದ ಡಾ.ಭೋಜರಾಜ ಬ.ಪಾಟೀಲರವರು "ನಾಗರ ಖಂಡದಲ್ಲಿ ಕನ್ನಡ ನಾಡು ಕಂಡ ಓರ್ವ ಮಹಾತಳವಾರ ಮಾಚೆಯನಾಯಕ" ಎಂದು ಉಲ್ಲೇಖಿಸಿದ್ದಾರೆ. ಇದು ಇಲ್ಲಿನ ಶಿಕ್ಷಣದ ಗುಣಮಟ್ಟವನ್ನು ಅಳೆಯುವುದಕ್ಕಿರುವ ಒಂದು ದೊಡ್ಡ ಅಳತೆಗೋಲು ಎನಿಸುತ್ತದೆ. ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಎಲ್ಲಾ ಮೂಲಭೂತ ಅಂಶಗಳಿಗೆ ಒತ್ತು ನೀಡುವ ಶಿಕ್ಷಣದ ಪರಿಸರ ಇಲ್ಲಿತ್ತು ಎಂದು ಹೇಳಬಹುದು.

04. ಸಮಾನ ಶಿಕ್ಷಣ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಭಾಗದ ಶಿಲಾಶಾಸನಗಳು ಮತ್ತು ಸಂಶೋಧಕರ ಅಭಿಪ್ರಾಯಗಳ ಆಧಾರದ ಮೇಲೆ ಇಲ್ಲಿನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ಸಮಾನ ಶಿಕ್ಷಣ, ಸ್ತ್ರೀಶಿಕ್ಷಣದ ಅವಕಾಶಗಳಿದ್ದರಬಹುದಾದ ಸಂಗತಿಗಳನ್ನು ಗುರುತಿಸಬಹುದು.

ತಾಳಗುಂದದ ಮಹಾರಾಣಿ ಪ್ರಭಾವತಿ, ಮಾಚಿಕವ್ವೆ; ಬಳ್ಳಿಗಾವೆಯ ನಾಗಿಯಕ್ಕ, ಎರಡನೇ ನಾಗಿಯಕ್ಕ, ನಾಟ್ಯರಾಣಿ ಶಾಂತಲೆ, ಬೇಗೂರಿನ ಕೇತಬ್ಬೆ, ಚಿಕ್ಕಮಾಗಡಿಯ ಕವಯತ್ರಿ ಜಕ್ಕಲಾಂಬೆ, ಇವರುಗಳ ವ್ಯಕ್ತಿತ್ವದ ಚಿತ್ರಣವಿದ್ದು, ಇವರುಗಳು

"ವೇದ, ಪುರಾಣ, ನೀತಿಶಾಸ್ತ್ರ, ತರ್ಕ, ಆಗಮ, ಕಾವ್ಯ, ನಾಟಕ, ಕಥಾ, ಸ್ಮೃತಿ ಮೊದಲಾದ ಪಾಂಡಿತ್ಯ"ವನ್ನು ಹೊಂದಿದವರು ಎಂಬ ಉಲ್ಲೇಖಗಳಿವೆ. ಹೆಣ್ಣುಮಕ್ಕಳಿಗೆ ಶಿಕ್ಷಣಕ್ಕಾಗಿ ಇಲ್ಲಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಯಾವ ಸೌಲಭ್ಯಗಳಿದ್ದವೆಂಬುದಕ್ಕೆ ನಿಖರವಾದ ಆಧಾರಗಳಿಲ್ಲ ಆದರೆ ಅರಸುಮನೆತನದ ಮತ್ತು ಶ್ರೀಮಂತ ಕುಟುಂಬಗಳ ಹೆಣ್ಣುಮಕ್ಕಳಿಗೆ ನಿರ್ದಿಷ್ಟ ಶಿಕ್ಷಣವ್ಯವಸ್ಥೆ ಇದ್ದಿರಲೇ ಬೇಕು. ಅವರಿಗೆ ಅಕ್ಷರ ವಿದ್ಯೆಯ ಜೊತೆಗೆ ಸಂಗೀತ, ನೃತ್ಯ, ಆಡಳಿತಜ್ಞಾನ ಇತ್ಯಾದಿ ಶಿಕ್ಷಣದ ಸೌಲಭುಗಳಿದ್ದವು. ಮಹಿಳಾ ಶಿಕ್ಷಣ ಬಹುಮಟ್ಟಿಗೆ ಅವರವರ ಮನೆಗಳಲ್ಲೇ ನಡೆಯುತ್ತಿದ್ದಿರಬೇಕು. ಏನೇ ಆದರೂ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಭಾಗದ ಸ್ತ್ರೀಶಿಕ್ಷಣಕ್ಕೆ ಉತ್ತಮವಾದ ಪ್ರೋತ್ಸಾಹಗಳಿದ್ದವು ಎಂದು ಹೇಳಬಹುದು.

ಬಂದಳಿಕೆಯ ಶಾಸನವು ಮಾಚೆನಾಯಕನ ಬಗೆಗೆ ಪ್ರಾಸ್ತಾಪಿಸುತ್ತದೆ. ತಳವಾರನಾಗಿದ್ದ ಮಾಚಿಗನೆಂಬಾತ ತನ್ನ ಪರಾಕ್ರಮದಿಂದಾಗಿ ಹೆಗ್ಗಡೆ ಪದವಿಗೇರಿದನು. ಸಂಶೋಧಕರಾದ ಡಾ.ಎಂ.ಚಿದಾನಂದಮೂರ್ತಿಯವರು "ಅಗ್ರಹಾರಗಳಲ್ಲಿ ಬ್ರಾಹ್ಮಣರಲ್ಲದೆ ಇತರ ಜಾತಿಯ ಜನರೂ ಇದ್ದರು. ವೇದಗಳನ್ನು ಬಿಟ್ಟು ಸ್ಮೃತಿ, ಪುರಾಣ, ಮಹಾಕಾವ್ಯಾದಿಗಳನ್ನು ಶೂದ್ರರೂ ಅಧ್ಯಯನ ಮಾಡಬಹುದಿತ್ತು. ಮಹಾಜನರು ಆ ಇತರ ಜನರ ವಿಷಯದಲ್ಲಿ ಔದಾರ್ಯದಿಂದಲೇ ನಡೆದುಕೊಂಡಿದ್ದಾರೆ" ಎಂದಿದ್ದಾರೆ.

ಇಲ್ಲಿನ ವಿದ್ಯಾಕೇಂದ್ರದಲ್ಲಿ ಸಾಮಾಜಿಕ ಸಮಾನತೆಯನ್ನು ಮನಗಾಣಬಹುದು. ಸಾಮಾನ್ಯರಿಗೆ ಶಿಕ್ಷಣದ ಲಭ್ಯತೆ ಇತ್ತು. ಹಾಗೂ ಇಲ್ಲಿ ಸ್ತ್ರೀಶಿಕ್ಷಣದ ಅವಕಾಶಗಳಿದ್ದಿರಬಹುದು. ಇವೆರೆಲ್ಲಾ ಸ್ತ್ರೀಶಿಕ್ಷಣದ ಪ್ರಾತಿನಿಧಿಕ ವ್ಯಕ್ತಿಯಾಗಿ ಕಾಣುತ್ತಾಳೆ. ಇಲ್ಲಿ ಮಹಿಳೆಯು ಕೂಡ ಪುರುಷರಿಗೆ ಸಮಾನವಾದ ಜ್ಞಾನವನ್ನು ಪಡೆದುಕೊಳ್ಳುತ್ತಿದ್ದಳು. ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

05. ಪರಿಕಲ್ಪನೆಗಳ ಆಳವಾದ ಅಧ್ಯಯನಕ್ಕೆ ಉತ್ತೇಜನೆ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ವಿಷಯ ಪರಿಕಲ್ಪನೆಗಳ ಆಳವಾದ ಅಧ್ಯಯನಕ್ಕೆ ಉತ್ತೇಜನೆಯನ್ನು ನೀಡಲಾಗಿತ್ತು. ಇಲ್ಲಿ ವೇದ, ವೇದಾಂತ, ಸಿದ್ಧಾಂತ ಜ್ಞಾನ, ಷಡ್ದರ್ಶ, ಪಂಚವ್ಯಾರಣ, ಅಷ್ಟಾಂಗ, ಯೋಗ, ತರ್ಕಶಾಸ್ತ್ರ, ಆಗಮ, ಪುರಾಣ, ನೀತಿಶಾಸ್ತ್ರ, ಕಾವ್ಯ, ನಾಟಕ, ಕಥಾ, ಸ್ಮೃತಿ ಮೊದಲಾದ ವಿಷಯದಲ್ಲಿ ಆಳವಾದ ಅಧ್ಯಯನಕ್ಕೆ ಅವಕಾಶಗಳಿದ್ದವು. ಹಾಗಾಗಿ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

06. ಜೀವನ ಕೌಶಲ್ಯಗಳ ಬೆಳವಣಿಗೆಯ ಶಿಕ್ಷಣ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ಜೀವನ ಕೌಶಲ್ಯಗಳ ಬೆಳವಣಿಗೆಗೆ ಬಹಳಷ್ಟು ಉತ್ತೇಜನಗಳನ್ನು ನೀಡಲಾಗಿತ್ತು. ಯಮ, ನಿಯಮ, ಸ್ವಾಧ್ಯಾಯನ, ಧ್ಯಾನ, ಧಾರಣ, ಮೌನ, ಅನುಷ್ಠಾನ, ಜಪ, ಸಮಾಧಿ, ಶೀಲ ಮೊದಲಾದ ಗುಣಗಳನ್ನು ಶಿಕ್ಷಣದಲ್ಲಿ ಸಂಯೋಜಿಸಿ ವ್ಯಕ್ತಿಯಲ್ಲಿ ಮೈಗೂಡಿಸಲಾಗುತ್ತಿತ್ತು. ಕಲಿಯ ಬೋಧನಾ ಹಂತದಲ್ಲಿ ಶ್ರವಣ, ಮನನ ಮತ್ತು ನಿದಿಧ್ಯಾಸನ (ಧ್ಯಾನ) ವಿಧಾನಗಳ ಮೂಲಕ ಕಲಿಕಾರ್ಥಿಗಳು ಸತ್ಯವನ್ನು ಅರಿತುಕೊಳ್ಳುತ್ತಿದ್ದರು ಮತ್ತು ಅದರಲ್ಲಿ ಪಾಲ್ಗೊಳ್ಳುತ್ತಿದ್ದರು. ಜೀವನದ ಅಂತಿಮ ಸಾಕ್ಷಾತ್ಕಾರಕ್ಕೆ ಇದು ಅನಿವಾರ್ಯವೆಂದು ಪರಿಗಣಿಸಲಾಗಿತ್ತು. ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

07. ಮಾನವೀಯತೆ ಹಾಗೂ ನೈತಿಕ ಮೌಲ್ಯಗಳ ಶಿಕ್ಷಣ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ಮಾನವೀಯತೆ ಹಾಗೂ ನೈತಿಕ ಮೌಲ್ಯಗಳ ಶಿಕ್ಷಣಕ್ಕೆ ಉತ್ತೇಜನವನ್ನು ನೀಡಲಾಗಿತ್ತು. ತಾಳಗುಂದದ ಕ್ರಿ.ಶ.1158ರ 185ನೇ ಶಾಸನವು ಉಪಾಧ್ಯಾಯರ ಅರ್ಹತೆಗಳು, ನೇಮಕಾತಿ ವಿಧಾನ ಮತ್ತು ಅದರ ಮಾನದಂಡಗಳನ್ನು ಉಲ್ಲೇಖಿಸುವ ಸಂದರ್ಭದಲ್ಲಿ ಭಟ್ಟ ವೃತ್ತಿ ಸ್ವೀಕರಿಸುವವರು ನಾಲ್ವರು

ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಆರಿಸಿಕೊಂಡು, ಅವರಿಗೆ ದಿನಕ್ಕೆ ಒಂದು ಹೊತ್ತು ಊಟವನ್ನು ಕೊಟ್ಟು, ವಿಷಯಗಳನ್ನು ಬೋಧಿಸಿ, ಪರಿಣತರನ್ನಾಗಿ ಮಾಡಿ ಕಳುಹಬೇಕು ಎಂದು ಉಲ್ಲೇಖಿಸುತ್ತದೆ. ಇಲ್ಲಿನ ಎಲ್ಲಾ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಅನ್ನ ಆಹಾರಗಳಿಗಾಗಿ ದತ್ತಿ ಸೇವೆಯ ನೀಡಲಾಗಿತ್ತು.

ವೇದ, ವೇದಾಂತಗಳು, ದರ್ಶನಗಳು, ಸ್ಮೃತಿ, ಪುರಾಣ, ಶಾಸ್ತ್ರಗಳು, ನ್ಯಾಯಶಾಸ್ತ್ರ, ತತ್ವಶಾಸ್ತ್ರ, ಯೋಗ ಮೊದಲಾದ ವಿಷಯಗಳ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಮಾನವೀಯತೆ ಹಾಗೂ ನೈತಿಕ ಮೌಲ್ಯಗಳ ಶಿಕ್ಷಣವನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ನೀಡಲಾಗಿತ್ತು. ಬಂದಳಿಕೆಯ ತಳವಾರನಾಗಿದ್ದ ಮಾಚೀನಾಯಕನೆಂಬಾತ ತನ್ನ ಪರಾಕ್ರಮದಿಂದಾಗಿ ಹೆಗ್ಗಡೆ ಪದವಿಗೇರಿ, ಹಲವು ಸಾಮಾಜಿಕ ಕಾರ್ಯದಲ್ಲಿ ತನ್ನನ್ನು ತೊಡಗಿಸಿಕೊಂಡು, ಮಾನವೀಯತೆಯನ್ನು ಮೆರೆದ ಉಲ್ಲೇಖಗಳಿವೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

08. ಪ್ರಾಚೀನ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಜ್ಞಾನ ವ್ಯವಸ್ಥೆಗಳ ಸಮನ್ವಯ ಶಿಕ್ಷಣ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ಪ್ರಾಚೀನ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಜ್ಞಾನ ವ್ಯವಸ್ಥೆಗಳ ಸಮನ್ವಯ ಶಿಕ್ಷಣವನ್ನು ಕಾಣುತ್ತೇವೆ. ಇಲ್ಲಿ ನಾಲ್ಕು ವೇದಗಳು, ಆರು ವೇದಾಂಗ, ಆರು ದರ್ಶನಗಳು, ಮೀಮಾಂಸೆ, ಹದಿನೆಂಟು ಪುರಾಣ, ಸ್ಮೃತಿ, ವಾಸ್ತು, ಕಲೆ ಮೀಮಾಂಸೆ, ಶಾಸ್ತ್ರಗಳು, ಷಟ್ಕರ್ಮ, ಪಂಚವ್ಯಾಕರಣ, ಸ್ಮೃತಿ, ಪುರಾಣ, ಕಾವ್ಯ, ನಾಟಕಶಾಸ್ತ್ರದ ಶಬ್ದಶಾಸ್ತ್ರ, ಬಾಲಶಿಕ್ಷೆಯ ಶಾಸ್ತ್ರ, ಕೌಮಾರ, ಪಾಣಿನೀಯ, ಶಾಕಟಾಯನ, ಶಬ್ದನುಶಾಸನ, ನ್ಯಾಯ, ವೈಶೇಷಿಕ, ಮೀಮಾಂಸಾ, ಸಾಂಖ್ಯ, ಬೌದ್ಧ, ಮುಂತಾದ ತತ್ವಶಾಸ್ತ್ರದ ಆರು ಪದ್ಧತಿಗನ್ನು, ಲಾಕುಳ ಸಿದ್ಧಾಂತ ಹಾಗೂ ಪಾತಂಜಲ ಅಲ್ಲದೆ ಬೇರೆ ಯೋಗಶಾಸ್ತ್ರಗಳಿಗೆ ಭಾಷ್ಯಗಳನ್ನು, ಅರವತ್ತಾಲ್ಕು ವಿದ್ಯೆಗಳನ್ನು ಅಧ್ಯಯನ ಮತ್ತು ಅಧ್ಯಾಪನದಲ್ಲಿ ತೊಡಗುವ ತಾಣವಾಗಿದ್ದು, ಪ್ರಾಚೀನ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಜ್ಞಾನ ವ್ಯವಸ್ಥೆಗಳ ಸಮನ್ವಯ ಶಿಕ್ಷಣವನ್ನು ಇಲ್ಲಿ ಕಾಣುತ್ತೇವೆ. ಹಾಗಾಗಿ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

09. ವೃತ್ತಿಪರ ಹಾಗೂ ಪ್ರಾಯೋಗಿಕ ಕಲಿಕೆಗೆ ಉತ್ತೇಜನ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ವೃತ್ತಿಪರ ಹಾಗೂ ಪ್ರಾಯೋಗಿಕ ಕಲಿಕೆಗೆ ಹೆಚ್ಚಿನ ಉತ್ತೇಜನವನ್ನು ನೀಡಲಾಗಿತ್ತು. ವೈವಿಧ್ಯಮಯ ಪಠ್ಯಕ್ರಮಗಳನ್ನು ಪ್ರಾಯೋಗಿಕವಾಗಿ ಕಲಿಸುತ್ತಿದ್ದ ಉಲ್ಲೇಖವಿದೆ. ಇಲ್ಲಿ ಕಲೆ, ಸಂಗೀತ, ಶಿಲ್ಪಕಲೆ, ನೃತ್ಯಕಲೆ, ಯೋಗಶಾಸ್ತ್ರ, ಕಾವ್ಯರಚನೆ, ನಾಟಕ, ಲಘು ಪ್ರಹಸನಗಳು ಹಾಗೂ ವೃತ್ತಿಪರ ಕಥಾಕಥನಕಾರರು, ಗಾಯಕರು, ಸಂಗೀತಗಾರರು ಮೊದಲಾದವರಿಂದ ಪ್ರಾಯೋಗಿಕ ವಿಧಾನವನ್ನು ಬಳಸಿಕೊಂಡು ಕಲಿಸುವ ಪ್ರಮುಖ ತಾಣವಾಗಿತ್ತು. ಬೇಗೂರಿನ 15ನೇ ಶಾಸನದಲ್ಲಿ "ಜ್ಯೋತಿರ್ಜ್ಞಾನಾದಿಸಕಳ ಚೌಷಷ್ಟಿ ಶ್ರುತಾವತಾರರು" ಎಂದಿದೆ. ಜ್ಯೋತಿರ್ವಿಜ್ಞಾನ, ಖಗೋಳಶಾಸ್ತ್ರಗಳನ್ನು ಆಕಾಶ ವೀಕ್ಷಣೆಯ ಮೂಲಕ ಪ್ರಾಯೋಗಿಕವಾಗಿ ಕಲಿಸಲಾಗುತ್ತಿತ್ತು.

ಇಲ್ಲಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಸೈದ್ಧಾಂತಿಕ ಹಾಗೂ ಪ್ರಾಯೋಗಿಕ ಈ ಎರಡೂ ವಿಧಾನದಲ್ಲಿ ಶಿಕ್ಷಣವನ್ನು ನೀಡಲಾಗುತ್ತಿತ್ತು. ಕಲೆ, ವಾಸ್ತುಶಿಲ್ಪ ಮತ್ತು ಕರಕುಶಲ ಕೆಲಸಗಳಲ್ಲಿ ಪರಿಣತಿಯನ್ನು ಸಾಧಿಸಲು ವೃತ್ತಿಪರ ಹಾಗೂ ಪ್ರಾಯೋಗಿಕ ಕಲಿಕೆಗೆ ಮಾರ್ಗದರ್ಶನವನ್ನು ನೀಡಲಾಗುತ್ತಿತ್ತು. ಹೀಗೆ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಇಲ್ಲಿ ಗುರುತಿಸಬಹುದು.

10. ತಾರ್ಕಿಕ ಮತ್ತು ನಾವೀನ್ಯತೆಯನ್ನು ಉತ್ತೇಜನ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ತಾರ್ಕಿಕ ಮತ್ತು ನಾವೀನ್ಯತೆಗೆ ಹೆಚ್ಚು ಉತ್ತೇಜನ ನೀಡಿರುವುದನ್ನು ಗುರುತಿಸಬಹುದು. ಇಲ್ಲಿನ ಬಳ್ಳಿಗಾವೆ ವಿದ್ಯಾಕೇಂದ್ರವು ಒಂದು ಉನ್ನತ ಶಿಕ್ಷಣದ ಕೇಂದ್ರವಾಗಿತ್ತು. ಇಲ್ಲಿ

ವಿದ್ಯಾರ್ಥಿಗಳು, ಉಪಾಧ್ಯಾಯರು ಮಧ್ಯ ಚರ್ಚೆಗಳು ನಡೆಸುತ್ತಿದ್ದು, ಇಂತಹಾ ವಿದ್ಯಾಕೇಂದ್ರಗಳನ್ನು 'ಘಟಿಕಸ್ಥಾನ'ವೆಂದು ಕರೆಯಲಾಗುತ್ತಿತ್ತು. ಇಲ್ಲಿ ಶಿಕ್ಷಣದ ಅವದಿಯ ಕೊನೆಯಲ್ಲಿ ಪರೀಕ್ಷೆಗಳಿರುತ್ತಿದ್ದು, ಪರೀಕ್ಷೆ ನಡೆಸುವ ಸ್ಥಳವನ್ನು 'ಘಟಿಕಾ ಸ್ಥಾನ' ಎಂದು ಕರೆಯಲಾಗುತ್ತಿತ್ತು. ಇಲ್ಲಿ ವಾದಪ್ರತಿವಾದಗಳು, ಪಠ್ಯ ವಿಷಯಗಳ ಕುರಿತು ತಾರ್ಕಿಕ ಚಿಂತನ ಮಂಥನಗಳು ನಡೆಯುತಿದ್ದವು. ವಾದದಲ್ಲಿ ಜಯಗಳಿಸಿದವರಿಗೆ 'ಘಟಿಕಾ ಸಾಹಸಿ', 'ಫತಿಕಾವಾಡಿ' ಎಂಬ ಬಿರುದು ನೀಡಿ ಗೌರವಿಸಲಾಗುತ್ತಿತ್ತು.

ಇಲ್ಲಿ ಹೊಸಹೊಸ ನಾವೀನ್ಯತೆಯುಳ್ಳ ಹಲವು ವಿಶೇಷ ಪಠ್ಯ ಅಧ್ಯಯನಕ್ಕೆ ಉತ್ತೇಜನವನ್ನು ನೀಡಲಾಗಿತ್ತು. ವಾಸ್ತುಶಿಲ್ಪ, ಷಟ್ಚಕ್ರ, ಪಂಚವ್ಯಾಕರಣ, ನಾಟಕಶಾಸ್ತ್ರ, ಶಬ್ದಶಾಸ್ತ್ರ, ರೂಪಾವತಾರ ಶಾಸ್ತ್ರಗಳು, ಬಾಲಶಿಕ್ಷೆಯ ಶಾಸ್ತ್ರ, ಗಮಕ ವ್ಯಾಖ್ಯಾನಗಳು, ಕಾವ್ಯರಚನೆ, ನಾಟಕ, ಲಘು ಪ್ರಹಸನ, ಜ್ಯೋತಿರ್ವಿಜ್ಞಾನ ಮೊದಲಾದ ನಾವೀನ್ಯತೆಯುಳ್ಳ ವಿಷಯಗಳು ಇಲ್ಲಿನ ಅಧ್ಯಯನದ ವಿಷಯಗಳಾಗಿದ್ದು,

ಇಂತಹಾ ಶಿಕ್ಷಣವನ್ನು ಇಂದಿನ 'ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020' ರಲ್ಲೂ ಕಾಣಬಹುದಾಗಿದ್ದು, ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಗುರುತಿಸಬಹುದಾಗಿದೆ.

11. ಬೋಧನೆ, ಕಲಿಕೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನದಲ್ಲಿ ಗುಣಮಟ್ಟದ ಅಳವಡಿಕೆ.

ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ಬೋಧನೆ, ಕಲಿಕೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನದಲ್ಲಿ ಗುಣಮಟ್ಟದ ಅಳವಡಿಕೆಯನ್ನು ಮನಗಾಣಬಹುದು. ತಾಳಗುಂದದ 176ನೇ ಶಾಸನವು "ಸ್ವಾಧ್ಯಾಯನದ ಗುಣಗಳನ್ನು ತಾಣಗುಂದರಿನವರು ಹೊಂದಿದ್ದರು" ಎಂದು, ಬಳ್ಳಿಗಾವೆಯ 102ನೇ ಶಾಸನವು "ಬಳ್ಳಿಗಾವೆಯ ಕೋಡಿಯ ಮಠವು ಚತುರ್ವೇದ ಸ್ವಾಧ್ಯಾಯ ತಾಣವಾಗಿತ್ತು." ಎಂದು ಉಲ್ಲೇಖಿಸಿವೆ. ಸ್ವಾಧ್ಯಾಯನವು ವಿದ್ಯಾಕೇಂದ್ರಗಳ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯ ಪ್ರಮುಖ ಭಾಗವಾಗಿದ್ದು, ಇದು ಕಲಿಕಾರ್ಥಿಯ ಆಂತರಿಕ ಮತ್ತು ಬಾಹ್ಯ ಆಯಾಮಗಳೆರಡನ್ನೂ ಗುರಿಯಾಗಿಸಿಕೊಂಡು ಉನ್ನತ ಜ್ಞಾನ ಸಂಪಾದನೆಯ ಮಾರ್ಗವಾಗಿ ಸ್ವಾಧಾಯನ ವಿಧಾನವನ್ನು ಬಳಸಲಾಗುತ್ತಿತ್ತು. ಇಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಯ ಸ್ವಯಂ ನಿಯಂತ್ರಣದೊಂದಿಗೆ ಇಂದ್ರಿಯಗಳ ನಿಗ್ರಹ ಮತ್ತು ಯಮ (ಸ್ವಯಂ ಸಂಯಮ), ನಿಯಮ (ಐದು ಆಚರಣೆಗಳು) ಮತ್ತು ಆತ್ಮಾವಲೋಕನ ಅಂಶಗಳನ್ನು ಆಧಾರಿಸಿ ಕಲಿಕೆಯ ಹಂತವಾಗಿ ರೂಪಗೊಂಡಿರುವುದನ್ನು ಕಾಣುತ್ತೇವೆ. ಇಲ್ಲಿ ವಿಭಿನ್ನ ಪಠ್ಯವಿಷಯಗಳು ಕಲಿಕೆಯ ಭಾಗಗಳಾಗಿದ್ದವರ.

ಬಳ್ಳಿಗಾವೆ ಒಂದು ಉನ್ನತ ಶಿಕ್ಷಣದ ಕೇಂದ್ರವಾಗಿದ್ದು, ಇದನ್ನು ಘಟಿಕಸ್ಥಾನವೆಂದು ಕರೆಯಲಾಗುತ್ತಿತ್ತು. ಇಲ್ಲಿ ಶಿಕ್ಷಣದ ಅವದಿಯ ಕೊನೆಯಲ್ಲಿ ಪರೀಕ್ಷೆಗಳಿರುತ್ತಿದ್ದು, ಘಟಿಕಾಸ್ಥಾನಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಯು ಸಂಪಾದಿಸಿದ ವಿದ್ವಂತಿನ ಆಧಾರದ ಮೇಲೆ ಚರ್ಚೆಗಳು, ವಾದಗಳು ನಡೆಯುತ್ತಿದ್ದವು. ವಿದ್ಯಾಭ್ಯಾಸವನ್ನು ಮುಗಿಸಿದ ವಿದ್ಯಾರ್ಥಿಯನ್ನು ಸ್ನಾತಕ ಎಂದು ಕರೆಯಲಾಗುತ್ತಿತ್ತು. ಇವರ ವಿದ್ವತ್ತನ್ನು ಪ್ರಶ್ನಿಸುವ ಅಥವಾ ವಾದಗಳಿಗೆ ಆಹ್ವಾನಿಸಿದಾಗ ಅವರ ವಿದ್ವತ್ತಿನ ಪ್ರದರ್ಶ ನಡೆಯುತ್ತಿತ್ತು. ವಿಜೇತರಾದವರಿಗೆ ಘಟಿಕಾಸಾಹಸಿ, ಭಟ್ಟೋಪಾಧ್ಯಾಯ, ಸಾಮವೇದಿ ಎಂಬ ಬಿರುದುಗಳನ್ನು ನೀಡಲಾಗುತ್ತಿತ್ತು. ಇವುಗಳು ಕೂಡು ಪದವಿ ಸೂಚಕಗಳಾಗಿದ್ದವು. ಹೀಗೆ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿ ಒಂದು ಪ್ರಬುದ್ಧವಾದ ಬೋಧನೆ, ಕಲಿಕೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನವನ್ನು ಅಳವಡಿಸಿರುವುದನ್ನು ಕಾಣುತ್ತೇವೆ. ಈ ಒಂದು ಪರಿಕಲ್ಪನೆಯನ್ನು ಇಂದಿನ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳಲ್ಲೂ ಕಾಣಬಹುದಾಗಿದೆ.

ಪ್ರಸ್ತುತ ಅಧ್ಯಯನದ ಫಲಿತಾಂಶ :

□. ಪ್ರಾಚೀನ ಕಾಲದಿಂದಲೂ ಭಾರತೀಯ ಶಿಕ್ಷಣವು ಶ್ರೀಮಂತ ಪರಂಪರೆಯನ್ನು ಹೊಂದಿದೆ. ಇಲ್ಲಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳು ಶ್ರೇಷ್ಠ ವ್ಯಕ್ತಿಗಳ ನಿರ್ಮಾಣ ಕಾರ್ಯದಲ್ಲಿ ಸದಾ ತೊಡಗಿದ್ದವು. ಅದೇ ರೀತಿಯಲ್ಲಿ ಕರ್ನಾಟಕದ ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆ ಶಿಕಾರಿಪುರ ತಾಲ್ಲೂಕಿನ ಅರೆಮಲೆನಾಡಿನ ಪ್ರದೇಶದ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಸರ, ಕಲಿಕೆಯ ವಿಷಯಗಳು

ಶ್ರೇಷ್ಠಮಟ್ಟದ ಮಾದರಿಯನ್ನು ಹೊಂದಿದ್ದು, ಇಲ್ಲಿನ ಉತ್ಕೃಷ್ಟವಾದ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳನ್ನು ಗಮನಿಸಿದರೆ ಇಲ್ಲಿನ ಶಿಕ್ಷಣದ ಶ್ರೇಷ್ಠತೆಯನ್ನು ಮನಗಾಣಬಹುದು.

     □. ಸುಸಂಸ್ಕೃತ, ಸಮಗ್ರ ಕಲಿಕೆಯ ಮತ್ತು ಶಿಸ್ತಿನ ವಿದ್ಯಾಕೇಂದ್ರಗಳ ಪಠ್ಯಕ್ರಮಗಳು ಉನ್ನತ ಪರಂಪರೆಯನ್ನು ಪ್ರತಿನಿಧಿಸುತ್ತವೆ. ಉತ್ಕೃಷ್ಟವಾದ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ಹೊಂದಿದ್ದರ ಸಂಕೇತಗಳಾಗಿವೆ. ಇಲ್ಲಿ ಬಹುಶಿಸ್ತೀಯ ಮತ್ತು ಶಿಕ್ಷಣ ಸಮಗ್ರ, ಸೃಜನಶೀಲತೆ ಹಾಗೂ ವಿಮಶಾತ್ಮಕ ಚಿಂತನೆ, ವೈವಿಧ್ಯತೆಗೆ ಗೌರವ ಹಾಗೂ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣ, ಸಮಾನ ಹಾಗೂ ಅಂತರ್ಗತ ಶಿಕ್ಷಣ, ಪರಿಕಲ್ಪನೆಗಳ ಆಳವಾದ ಅಧ್ಯಯನಕ್ಕೆ ಉತ್ತೇಜನೆ, ಜೀವನ ಕೌಶಲ್ಯಗಳ ಬೆಳವಣಿಗೆಯ ಶಿಕ್ಷಣ, ಮಾನವೀಯತೆ ಹಾಗೂ ನೈತಿಕ ಮೌಲ್ಯಗಳ ಶಿಕ್ಷಣ, ಪ್ರಾಚೀನ ಸಂಸ್ಕೃತಿ ಮತ್ತು ಜ್ಞಾನ ವ್ಯವಸ್ಥೆಗಳ ಸಮನ್ವಯ ಶಿಕ್ಷಣ, ವೃತ್ತಿಪರ ಹಾಗೂ ಪ್ರಾಯೋಗಿಕ ಕಲಿಕೆಗೆ ಉತ್ತೇಜನ, ತಾರ್ಕಿಕ ಮತ್ತು ನಾವೀನ್ಯತೆಯನ್ನು ಉತ್ತೇಜನ, ಬೋಧನೆ, ಕಲಿಕೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನದಲ್ಲಿ ಗುಣಮಟ್ಟದ ಅಲವಡಿಕೆ ಮೊದಲಾಗಿ ಇಲ್ಲಿಯ ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಕಲಿಕೆಯ ಮೂಲಭೂತ ಪರಿಕಲ್ಪನೆಗಳಾಗಿದ್ದವು.

     □. ಅರವತ್ತುನಾಲ್ಕು ವಿದ್ಯೆಗಳಲ್ಲಿ ಪಾಂಡಿತ್ಯವನ್ನು ಹೊಂದಿ, ಅಧ್ಯಯನ ಅಧ್ಯಾಪನದಲ್ಲಿ ತೊಡಗಿದ, ಚತುರ್ಭಾಷಾ ಪಂಡಿತರು ಇಲ್ಲಿದ್ದರು. ಜ್ಞಾನಕ್ಷೇತ್ರಗಳಲ್ಲಿ ದೊಡ್ಡ ಪಂಡಿತರೆನಿಸಿದ್ದ ಅಧ್ಯಾಪಕ ವರ್ಗವಿದ್ದು, ಇಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ಅಂಶಗಳ ಸಾಕಾರಕ್ಕಾಗಿ ನಿರಂತರ ಅಧ್ಯಯನದಲ್ಲಿ ತೊಡಗಿದ್ದರು. ಹೀಗೆ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ತತ್ವಗಳು ಹಾಗೂ ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮೂಲಭೂತ ತತ್ವಗಳ ನಡುವಿನ ಸಾಮ್ಯತೆಯನ್ನು ಗುರುತಿಸಬಹುದಾಗಿದೆ.

ಉಪಸಂಹಾರ

     ಭಾರತದ ಪ್ರಸ್ತುತ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯು ಭಾರತದ ಹಿಂದಿನ ಜ್ಞಾನಪರಂಪರೆ ಮತ್ತು ಶ್ರೇಷ್ಠತೆಯ ವಿಕಾಸಿತ ರೂಪವಾಗಿದೆ. ಆಧುನಿಕ ಭಾರತೀಯ ಶಿಕ್ಷಣದಲ್ಲಿ ಬೋಧಿಸಲಾಗುವ ಎಲ್ಲಾ ಶಿಕ್ಷಣದ ಮೂಲಭೂತ ಪರಿಕಲ್ಪತೆಗಳನ್ನು ಗುರುಕುಲ ಶಿಕ್ಷಣದಲ್ಲಿ ಅಳವಡಿಸಲಾಗಿತ್ತು. ವಿದ್ಯಾಕೇಂದ್ರಗಳಲ್ಲಿ ಅನುಸರಿಸುತ್ತಿದ್ದ ಪ್ರಾಚೀನ ಶಿಕ್ಷಣ ಪದ್ಧತಿಯ ವೈಶಿಷ್ಟ್ಯಗಳು, ಕಲಿಸುವ ವಿಷಯಗಳು, ಜ್ಞಾನ ಸಂಪಾದನೆಯಗೆ ಬಳಸಿದ ಅಂಶಗಳು ಮೌಲ್ಯಾಧಾರಿತ ಶಿಕ್ಷಣಕ್ಕೆ ಹೆಚ್ಚು ಒತ್ತು ನೀಡಿದ್ದವು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಇಂದು ಆಧುನಿಕ ಶಿಕ್ಷಣದೊಂದಿಗೆ ಭಾರತದ ಪ್ರಾಚೀನ ಜ್ಞಾನದ ಮನಸ್ಸುಗಳನ್ನು ಸಂಯೋಜಿಸಬೇಕಿದೆ. ಭಾರತದ ಹಾಗೂ ಅರೆಮಲೆನಾಡು ಪ್ರದೇಶದ ಪ್ರಾಚೀನ ಶೈಕ್ಷಣಿಕ ಕೇಂದ್ರಗಳಲ್ಲಿನ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯ ಮೂಲಭೂತ ಅಂಶಗಳು ಹೊಸ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯ ಮುಂದುವರಿಕೆಯಾಗಿಯಂತೆ ಕಾಣುತ್ತಿದ್ದು, ಈ ನೆಲದ ಭವ್ಯ ಜ್ಞಾನದ ಪರಂಪರೆಯನ್ನು ಮುಂದಿನ ಜಗತ್ತಿಗೆ ಮುಟ್ಟಿಸುವ ಹೊಣೆಗಾರಿಕೆ ನಮ್ಮದಾಗಿದೆ.

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ಬಾಲವೀರಾ ರೆಡ್ಡಿ ಕೆ – "ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿ–2020", ಸದಸ್ಯರು, ಕರ್ನಾಟಕ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಅಕಾಡೆಮಿ, ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ.

ಗ್ರಾಮೀಣ ವಿದ್ಯಾರ್ಥಿಗಳ ಶಿಕ್ಷಣದ ಮೇಲೆ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನದ ಪ್ರಭಾವದ ಕುರಿತು ಒಂದು ಅಧ್ಯಯನ

ಶ್ರೀಮತಿ. ಜಯಶ್ರೀ ಕೆಂಗೇರಿ,
ಸಂಶೋಧನಾ ವಿದ್ಯಾರ್ಥಿ, ಶಿಕ್ಷಣಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ವಿಭಾಗ, ರಾಣಿ ಚನ್ನಮ್ಮ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಬೆಳಗಾವಿ

ಸಾರಲೇಖ

ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರವನ್ನಷ್ಟೆ ಅಲ್ಲದೆ ಹಲವಾರು ಕ್ಷೇತ್ರಗಳಲ್ಲಿ ತನ್ನ ಪ್ರಾಬಲ್ಯವನ್ನು ಸಾಧಿಸಿರುವುದನ್ನು ಇಂದು ನಾವೆಲ್ಲರೂ ಸಾಕ್ಷೀಕರಿಸುತ್ತಿದ್ದೇವೆ. ಗ್ರಾಮೀಣ ಪ್ರದೇಶಗಳಲ್ಲಿ, ವಿಶೇಷವಾಗಿ ಭಾರತದಂತಹ ದೇಶಗಳಲ್ಲಿ ಶಿಕ್ಷಣವನ್ನು ಡಿಜಿಟಲ್ ಮಾಡುವುದು ಅಷ್ಟು ಸುಲಭದ ಕೆಲಸವಲ್ಲ. ಗ್ರಾಮೀಣ ಪ್ರದೇಶಗಳಲ್ಲಿ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವನ್ನು ಕಲಿಕೆಯಲ್ಲಿ ಅಳವಡಿಸುವುದು ಅನೇಕ ಸವಾಲುಗಳನ್ನು ಹೊಂದಿದ್ದರೂ, ಅತ್ಯಂತ ವೇಗವಾಗಿ ಮತ್ತು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಬೆಳೆಯುತ್ತಿರುವ ವಿಜ್ಞಾನ ಮತ್ತು ತಂತ್ರಜ್ಞಾನ ಅದನ್ನು ಸಾಧ್ಯವನ್ನಾಗಿಸುತ್ತಿದೆ. ಇಂದಿನ ದಿನಮಾನಗಳಲ್ಲಿ ತಂತ್ರಜ್ಞಾನವು ಜನರ ಜೀವನದಲ್ಲಿ ಒಂದು ಅವಿಭಾಜ್ಯ ಅಂಗವಾಗಿ ಹೊರಹೊಮ್ಮಿದೆ. ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣವು ಭಾರತದಂತಹ ದೇಶದಲ್ಲಿ ಶೈಕ್ಷಣಿಕ ಅಭಿವೃದ್ಧಿಗೆ ಹಾಗೂ ಬದಲಾವಣೆಗೆ ಒಂದು ಪರಿಣಾಮಕಾರಿ ಸಾಧನವಾಗಿದೆ. ಗ್ರಾಮೀಣ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಕಲಿಕೆಯ ಫಲಿತಾಂಶಗಳನ್ನು ಹೆಚ್ಚಿಸಲು ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣವು ಹೇಗೆ ಪ್ರಭಾವವನ್ನು ಬೀರುತ್ತಿದೆ ಎಂಬುದನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು ಈ ಲೇಖನದಲ್ಲಿ ಪ್ರಯತ್ನಿಸಲಾಗಿದೆ. ಪ್ರಮುಖವಾಗಿ ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತೆಯನ್ನು ಹೆಚ್ಚಿಸಲು ಮತ್ತು ಅಂತರ್ಗತ ಶೈಕ್ಷಣಿಕ ಅಭ್ಯಾಸಗಳನ್ನು ಹೇಗೆ ಉತ್ತೇಜಿಸಬೇಕೆಂಬುದನ್ನು ಒಳಗೊಂಡಿದೆ. ಪ್ರಸ್ತುತ ಅಧ್ಯಯನದಲ್ಲಿ ಮಾಧ್ಯಮಿಕ ಮಾಹಿತಿ ಮೂಲಗಳನ್ನು ಬಳಸಿಕೊಳ್ಳಲಾಗಿದೆ ಹಾಗೂ ವಿವರಣಾತ್ಮಕ ಸಂಶೋಧನಾ ವಿನ್ಯಾಸವನ್ನು ಅಳವಡಿಸಿಕೊಂಡು ಒಂದು ರಚನಾತ್ಮಕ ಸಮಶೋಧನಾ ಲೇಖನವನ್ನು ರೂಪಿಸಲು ಪ್ರಯತ್ನಿಸಲಾಗಿದೆ.

ಪ್ರಮುಖ ಪದಗಳು: *ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನ, ಗ್ರಾಮೀಣ ಪ್ರದೇಶ, ಕಲಿಕೆಯ ಫಲಿತಾಂಶ, ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತೆ ಇತ್ಯಾದಿ..*

ಪೀಠಿಕೆ:

ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿನ ಪ್ರಸ್ತುತ ಬದಲಾವಣೆಗಳನ್ನು ನೋಡುತ್ತಿದ್ದರೇ ಖಂಡಿತವಾಗಿಯು ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ಹೊಸ ಅಲೆಯನ್ನು ಸೃಷ್ಟಿಮಾಡುವುದರಲ್ಲಿ ಸಂದೇಹವೆ ಇಲ್ಲ. ಹಳೆಯ ಶಿಕ್ಷಣ ಪದ್ಧತಿಗೆ ಒಂದು ಪ್ರಬಲವಾದ ಪ್ರತಿಸ್ಪರ್ಧಿಯಾಗಿ ಹೊರಹೊಮ್ಮುವಿಕೆಯು ಸ್ಪಷ್ಟವಾಗಿ ಕಂಡುಬರುತ್ತಿದೆ. ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸಿಕೊಂಡು ಇಂದು ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವೆಂಬ ಹೊಸ ಪರಿಭಾಷೆಯು ಹುಟ್ಟಿಕೊಂಡಿದೆ. ಅದರ ಮೂಲಕ ದೇಶದ ಎಲ್ಲ ಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅನುಕೂಲವಾಗಿದೆ. ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಮೂಲಕ ಹಲವಾರು ವಿದ್ಯಾರ್ಥಿಗಳು ವಿವಿಧ ವಿಷಯಗಳನ್ನು ವಿಭಿನ್ನವಾದ ರೀತಿಯಲ್ಲಿ ಕಲಿಯಲು ಸಾಧ್ಯವಾಗುತ್ತಿದೆ. ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸಿಕೊಂಡು ವಿದ್ಯಾರ್ಥಿಗಳು ಯಾವುದೇ ಸಮಸ್ಯೆಗಳನ್ನು ಪರಿಹರಿಸಿಕೊಳ್ಳಬಹುದಾಗಿದೆ. ವಿಶೇಷವಾಗಿ ಗ್ರಾಮೀಣ ಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಒಂದು ವರದಾನವಾಗಿದೆ ಏಕೆಂದರೆ ಅವರೂ ಕೂಡ ನಗರ ವಿದ್ಯಾರ್ಥಿಗಳ ಜೊತೆ ಎಲ್ಲ ಕ್ಷೇತ್ರಗಳಲ್ಲಿಯೂ ಸ್ಪರ್ಧಿಸಬಹುದಾಗಿದೆ.

ಶಿಕ್ಷಣ ನೀಡುವ ಪದ್ಧತಿಯ ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿ ಹಿಂದಿನ ಮತ್ತು ಪ್ರಸ್ತುತ ವರ್ಷಗಳನ್ನು ಅವಲೋಕಿಸಿದರೇ ಇಂದಿನ ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣವು ಬಹಳಷ್ಟು ವ್ಯತ್ಯಾಸಗಳನ್ನು ಸ್ಪಷ್ಟೀಕರಿಸುತ್ತದೆ. ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣವು ವಿಭಿನ್ನ ಆವಿಷ್ಕಾರಗಳನ್ನು ನೀಡುತ್ತ ಎಲ್ಲ ವರ್ಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅನುಕೂಲಕರವಾದ ಶೈಕ್ಷಣಿಕ ವಾತಾವರಣವನ್ನು ಸೃಷ್ಟಿಮಾಡಿದೆ. ಆದ್ದರಿಂದ ಭಾರತದಲ್ಲಿ ಆನ್‌ಲೈನ್ ಗುಣಮಟ್ಟವು ಹೆಚ್ಚುತ್ತಿದೆ ಮತ್ತು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸುವುದನ್ನು ಪ್ರಚೋದಿಸುತ್ತಿದೆ. ಡಿಜಿಟಲ್ ಕಲಿಕೆಯಲ್ಲಿ ಹೆಚ್ಚಿನ ವಿಷಯಗಳನ್ನು ಪಡೆಯಬಹುದು ಹಾಗೂ ಸಂಬಂಧಿತ ಸಮಸ್ಯೆಗಳಿಗೆ ತುರ್ತಾಗಿ ಪರಿಹಾರಗಳನ್ನು ಕಂಡುಕೊಳ್ಳಬಹುದಾಗಿದೆ. ಭಾರತದಲ್ಲಿ ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣವು ಹೊಸಹಂತದಲ್ಲಿ ಇದ್ದು ಯಾವದಕ್ಕೂ ಕಡಿಮೆ ಇಲ್ಲದೆ ವೇಗವಾಗಿ ಬೆಳೆಯುತ್ತಿದೆ ಮತ್ತ ಹೊಸ ಯುಗವನ್ನು ಸೃಷ್ಟಿಸಿದೆ.

ಅಧ್ಯಯನದ ಉದ್ದೇಶಗಳು:

- ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣದ ಪರಿಕಲ್ಪನೆಯನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವುದು
- ಭಾರತದಲ್ಲಿ ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣದ ಪ್ರಸ್ತುತ ಸ್ಥಿತಿ ಮತ್ತು ಭವಿಷ್ಯವನ್ನು ಅಧ್ಯಯನ ಮಾಡುವುದು

- ಗ್ರಾಮೀಣ ವಿದ್ಯಾರ್ಥಿಗಳ ಮೇಲೆ ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣದ ಪ್ರಭಾವವನ್ನು ತಿಳಿದುಕೊಳ್ಳುವುದು

ಸಂಶೋಧನಾ ವಿಧಾನ:

ಪ್ರಸ್ತುತ ಸಂಶೋಧನಾ ಲೇಖನವು ವಿವರಣಾತ್ಮಕ ಸಂಶೋಧನಾ ವಿನ್ಯಾಸದ ಸ್ವರೂಪದಲ್ಲಿದೆ. ಇಲ್ಲಿ ವಸ್ತುನಿಷ್ಠ ಮತ್ತು ದ್ವಿತೀಯ ವಿಧಾನಗಳನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳಲಾಗಿದೆ. ಪ್ರಸ್ತುತ ಲೇಖನದಲ್ಲಿ ದ್ವಿತೀಯ ದತ್ತಾಂಶ ವಿಧಾನಗಳಾದ ಪುಸ್ತಕಗಳು, ನಿಯತಕಾಲಿಕೆಗಳು ಮತ್ತು ಸಂಶೋಧನಾ ಜರ್ನಲ್‌ಗಳ ಮೂಲಕ ಮಾಹಿತಿಯನ್ನು ಸಂಗ್ರಹಿಸಲಾಗಿದೆ. ಅಧ್ಯಯನ ವಿಷಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಡಿಜಿಟಲ್ ಲೇಖನಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳಲಾಗಿದೆ.

ಶಿಕ್ಷಣದಲ್ಲಿ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನದ ಬೆಳವಣಿಗೆ:

ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ತಂತ್ರಜ್ಞಾನವು ಇತ್ತೀಚಿಗೆ ಬೆಳೆದು ಬಂದ ವಿಧಾನವಾಗಿದೆ. ಭಾರತದಲ್ಲಿ ಇಂಟರ್ನೆಟ್ ಕ್ರಾಂತಿಯು ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣಕ್ಕೆ ಪ್ರಮುಖ ಕಾರಣವೆಂದು ಹೇಳಬಹುದು. ದಶಕದ ಹಿಂದೆ ಇದ್ದ ಶಿಕ್ಷಣದ ಪದ್ಧತಿ ಹಾಗೂ ಇಂದಿನ ಪದ್ಧತಿಯು ಡಿಜಿಟಲ್ ಕ್ರಾಂತಿಗೆ ಹಿಡಿದ ಕನ್ನಡಿಯಾಗಿದೆ. ಪ್ರಮುಖವಾಗಿ ಕೊರೋನಾದಂತಹ ವಿಪತ್ತು ಬಂದು ಹೋದ ಮೇಲಂತು ಶಿಕ್ಷಣದಲ್ಲಿ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನದ ಬಳಕೆಯ ಹೇರಳವಾಯಿತು. ಆಗಸ್ಟ 2024ರ ಅಂಕಿಅಂಶಗಳ ಪ್ರಕಾರ ಭಾರತದಲ್ಲಿ ಒಟ್ಟು 850 ಮಿಲಿಯನ್ ಜನರು ಇಂಟರ್ನೆಟ್ ಸಂಪರ್ಕವನ್ನು ಹೊಂದಿದ್ದು, ಇದು ಪ್ರತಿ ವರ್ಷ ಶೇಕಡಾ 8% ರಷ್ಟು ಹೆಚ್ಚಾಗುತ್ತಿದೆ. ಈ ರೀತಿ ಬೆಳೆಯುತ್ತಿರುವ ಇಂಟರ್ನೆಟ್ ಸಂಪರ್ಕದಿಂದ ಡಿಜಿಟಲ್ ಕಲಿಕೆಯಲ್ಲಿ ಏರಿಕೆ ಕಂಡು ಬರುತ್ತಿದೆ. ಎಂದು ಹೇಳಬಹುದು.

ಗ್ರಾಮೀಣ ಭಾರತದಲ್ಲಿ ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಪಾತ್ರ ಮತ್ತು ಪ್ರಾಮುಖ್ಯತೆ:

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದ ಮೂಲಕ ಗ್ರಾಮೀಣ ಭಾಗದಲ್ಲಿ ಕಡಿಮೆ ವೆಚ್ಚದಲ್ಲಿ ಹೆಚ್ಚಿನ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಶಿಕ್ಷಣವನ್ನು ಪಡೆಯುವ ಅವಕಾಶವನ್ನು ಒದಗಿಸಬಹುದು. ಸಾಂಪ್ರದಾಯಿಕ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಗೆ ಭೌತಿಕ ಮೂಲ ಸೌಕರ್ಯಗಳ ಮತ್ತು ಹೆಚ್ಚಿನ ಸಮಯವನ್ನು ವೆಚ್ಚಮಾಡುವ ಅಗತ್ಯವಿರುತ್ತದೆ ಆದರೆ ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದಲ್ಲಿ ಅವುಗಳ ಅಗತ್ಯವಿಲ್ಲದಿರುವುದರಿಂದ ಅತ್ಯಂತ ವೇಗವಾಗಿ ಹೆಚ್ಚಿನ ಸಂಖ್ಯೆಯ ವಿದ್ಯಾರ್ಥಿ ಸಮುದಾಯವನ್ನು ತಲುಪಿ ಶಿಕ್ಷಣವನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಒದಗಿಸಬಹುದಾಗಿದೆ.   ಸರಿಯಾದ ಸಂವಹನ ಕೊರತೆಯಿಂದಾಗಿ ನಗರ ಪ್ರದೇಶಗಳಿಗೆ ಹೋಲಿಸಿದರೆ ಗ್ರಾಮೀಣ ಪ್ರದೇಶಗಳಲ್ಲಿ ಅನಕ್ಷರತೆಯ ಪ್ರಮಾಣ ಹೆಚ್ಚಿದೆ. ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸಿಕೊಂಡು ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವನ್ನು ನೀಡುವುದರಿಂದ ಈ ಸಮಸ್ಯೆಯನ್ನು ಪರಿಹರಿಸಬಹುದು. ಶಿಕ್ಷಣದ ಮಟ್ಟವನ್ನು ಸುಧಾರಿಸುವುದರಿಂದ ಖಂಡಿತವಾಗಿ ಎಲ್ಲ ಸಾಮಾಜಿಕ ಅನಿಷ್ಟ ಪದ್ಧತಿಗಳನ್ನು ಕಡಿಮೆ ಮಾಡಬಹುದು. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣವು ಪ್ರಮುಖ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತದೆ. ಭಾರತದಲ್ಲಿ ತಲಾ ಆದಾಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಗ್ರಾಮೀಣ ಪ್ರದೇಶಗಳ ತಲಾ ಆದಾಯವು ನಗರ ಪ್ರದೇಶಗಳ ತಲಾ ಆದಾಯವು ಬಹುತೇಕ ಅರ್ಧದಷ್ಟಿದೆ ಎಂದು ಅಧ್ಯಯನಗಳು ಹೇಳುತ್ತವೆ. ಆದ್ದರಿಂದ ಕನಿಷ್ಠ ವೆಚ್ಚದಲ್ಲಿ ಗರಿಷ್ಠ ಜನರನ್ನು ತಲುಪುವುದು ಕೇವಲ ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣದಿಂದ ಮಾತ್ರವೇ ಸಾಧ್ಯ. ಸಮಯ ಮತ್ತು ಸಂಪನ್ಮೂಲಗಳನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಬಳಸುವುದರಿಂದ ಆರ್ಥಿಕತೆಯಲ್ಲಿ ಉತ್ಪಾದಕತೆಯನ್ನು ದ್ವಿಗುಣಗೊಳಿಸಬಹುದು.

ಗ್ರಾಮೀಣ ವಿದ್ಯಾರ್ಥಿಗಳ ಶಿಕ್ಷಣದಲ್ಲಿ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನದ ಪ್ರಭಾವ:

ಕಳೆದ ಹತ್ತು ವರ್ಷಗಳಲ್ಲಿ ಆದಂತಹ ಶೈಕ್ಷಣಿಕ ಬದಲಾವಣೆಗಳನ್ನು ಅವಲೋಕಿಸಿದರೇ ಖಂಡಿತವಾಗಿಯೂ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಶಿಕ್ಷಣದ ಮೇಲೆ ಪ್ರಮುಖವಾಗಿ ಗ್ರಾಮೀಣ ಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳ ಶಿಕ್ಷಣದ ಮೇಲೆ ದೊಡ್ಡ ಮಟ್ಟದಲ್ಲಿ ಪ್ರಭಾವವನ್ನು ಬೀರಿರುವುದು ಕಂಡುಬರುತ್ತದೆ.

- **ಶಿಕ್ಷಣದಲ್ಲಿ ಹೆಚ್ಚಿದ ಪ್ರವೇಶ:** ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನದ ಅತ್ಯಂತ ಮಹತ್ವದ ಪ್ರಯೋಜನವೆಂದರೆ ಶಿಕ್ಷಣದಲ್ಲಿ ಹೆಚ್ಚಿದ ವಿದ್ಯಾರ್ಥಿಗಳ ಪ್ರವೇಶಾತಿ. ಭಾರತದಲ್ಲಿ ಇಂದು ಅಸ್ತಿತ್ವದಲ್ಲಿರುವ ಅನೇಕ ಪ್ರಖ್ಯಾತ ಇ–ಲರ್ನಿಂಗ್ ವೇದಿಕೆಗಳು ಅಥವಾ ಇ–ಲರ್ನಿಂಗ್ ತರಬೇತಿ ಸಂಸ್ಥೆಗಳು ದೇಶದ ಎಲ್ಲ ಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉಚಿತ ಅಥವಾ ಕೈಗೆಟಕುವ ದರದಲ್ಲಿ ಉನ್ನತ ಮಟ್ಟದ ಶಿಕ್ಷಣವನ್ನು ಒದಗಿಸುತ್ತವೆ. ಇಂತಹ ಇ–ಲರ್ನಿಂಗ್ ವೇದಿಕೆಗಳಿಂದ ಪ್ರಸಕ್ತ ವಿದ್ಯಮಾನಗಳನ್ನು ಸ್ಥಳೀಯವಾಗಿಯೇ ಅಧ್ಯಯನ ಮಾಡುವ ಅವಕಾಶಗಳನ್ನು ಇಂದು ಗ್ರಾಮೀಣ ಭಾಗದ

ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಲಭ್ಯವಾಗಿದೆ. ಸಮೀಕ್ಷೆಯ ಪ್ರಕಾರ ಶೇಕಡಾ 78% ರಷ್ಟು ವಿದ್ಯಾರ್ಥಿಗಳು ಸ್ಥಳೀಯವಾಗಿ ಲಭ್ಯವಿಲ್ಲದ ಕಲಿಕಾ ಸಾಮಗ್ರಿಗಳನ್ನು ಡಿಜಿಟಲ್ ಪ್ಲಾಟ್‌ಫಾರ್ಮ್‌ಗಳ ಸಹಾಯದಿಂದ ಪಡೆದುಕೊಂಡಿರುವುದು ದೃಢವಾಗಿದೆ.

- **ವೈಯಕ್ತಿಕಗೊಲಿಸಿದ ಕಲಿಕೆ:** ಡಿಜಿಟಲ್ ಉಪಕರಣಗಳು ವಿಭಿನ್ನ ಕಲಿಕೆಯ ಅನುಭವಗಳನ್ನು ಗ್ರಾಮೀಣ ಭಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಒದಗಿಸುವುದರ ಮೂಲಕ ವೈಯಕ್ತಿಕವಾಗಿ ಕಲಿಯುವ ಹೊಸ ಪ್ರಯೋಗಗಳಿಗೆ ಅನುಮತಿಸುತ್ತದೆ. ಕೃತಕ ಬುದ್ಧಿಮತ್ತೆ ಚಾಲಿತ ವೇದಿಕೆಗಳು ವಿದ್ಯಾರ್ಥಿಗಳ ಪ್ರಗತಿಯನ್ನು ನಿರ್ಣಯಿಸುವುದರ ಜೊತೆಗೆ ಅವರ ಕಲಿಕಾ ಸಮಸ್ಯೆಗಳನ್ನು ಗುರುತಿಸಿ ಕಲಿಕೆಯ ಗುಣಮಟ್ಟವನ್ನು ಎತ್ತರಿಸುವ ಕೆಲಸವನ್ನು ಮಾಡುತ್ತದೆ. ವಿದ್ಯಾರ್ಥಿಗಳು ನೈಜ–ಸಮಯದ ಪ್ರತಿಕ್ರಿಯೆಯನ್ನು ಸ್ವೀಕರಿಸುವ ಮೂಲಕ ತಮ್ಮದೇ ಆದ ವೇಗದಲ್ಲಿ ಕಲಿಯಬಹುದು. ಸಂವಾದಾತ್ಮಕ ಮತ್ತು ಹೊಂದಾನೀಕೆಯ ವೈಶಿಷ್ಟ್ಯಗಳಿಂದಾಗಿ ಸಂಕೀರ್ಣ ವಿಷಯಗಳನ್ನು ಉತ್ತಮವಾಗಿ ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು ಡಿಜಿಟಲ್ ಪ್ಲಾಟ್‌ಫಾರ್ಮ್‌ಗಳು ಸಹಾಯ ಮಾಡುತ್ತವೆ ಎಂದು ಶೇಕಡಾ 65% ವಿದ್ಯಾರ್ಥಿಗಳು ನಂಬಿರುತ್ತಾರೆ ಎಂಬ ಸತ್ಯಾಂಶ ಅಧ್ಯಯನದಿಂದ ಹೊರಬಂದಿದೆ.

- **ಭಾಗವಹಿಸುವಿಕೆಯ ಮತ್ತು ಸ್ವಯಂ–ಗತಿಯ ಕಲಿಕೆ:** ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವನ್ನು ಬಳಸಿಕೊಂಡು ಶಿಕ್ಷಣವನ್ನು ನೀಡುವ ವೇದಿಕೆಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಮ್ಮ ಅನುಕೂಲಕ್ಕೆ ತಕ್ಕಂತೆ ಕಲಿಯಲು ಅನುವು ಮಾಡಿಕೊಡುತ್ತವೆ. ಕಟ್ಟುನಿಟ್ಟಾದ ತರಗತಿಯ ವೇಳಾಪಟ್ಟಿಯನ್ನು ಅನುಸರಿಸಲು ಸಾಧ್ಯವಾಗದ ವಿದ್ಯಾರ್ಥಿಗಳು ಹಾಗೂ ಕೆಲಸ ಮಾಡುವ ವೃತ್ತಿಪರರಿಗೆ ಇದು ವಿಶೇಷವಾಗಿ ಪ್ರಯೋಜನಕಾರಿಯಾಗಿದೆ. ಸಮೀಕ್ಷೆಯ ಪ್ರಕಾರ ಶೇಕಡಾ 82% ರಷ್ಟು ವಿದ್ಯಾರ್ಥಿಗಳು ಉಪನ್ಯಾಸಗಳನ್ನು ಮರುಭೇಟಿ ಮಾಡುವ, ಕಲಿಕೆಯ ಮಾಡ್ಯೂಲ್‌ಗಳನ್ನು ವಿರಾಮಗೊಳಿಸುವ ಮತ್ತು ತಮ್ಮದೇ ಆದ ವೇಗದಲ್ಲಿ ಕೋರ್ಸ್ ಸಾಮಗ್ರಿಗಳೊಂದಿಗೆ ತೊಡಗಿಸಿಕೊಳ್ಳುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಗೌರವಿಸುತ್ತಾರೆ ಎಂದು ತೋರಿಸಿದೆ.

- **ಸಂವಾದಾತ್ಮಕ ಮತ್ತು ತೊಡಗಿಸಿಕೊಳ್ಳುವ ಕಲಿಕೆ:** ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಸಂವಾದಾತ್ಮಕ ಕಲಿಕೆಯ ಹೊಸ ರೂಪಗಳನ್ನು ಪರಿಚಯಿಸುವುದರ ಮೂಲಕ ಶಿಕ್ಷಣವನ್ನು ಹೆಚ್ಚು ತೊಡಗಿಸಿಕೊಳ್ಳುವಂತೆ ಮಾಡುತ್ತದೆ. ವರ್ಚುವಲ್ ಅಥವಾ ಗ್ರಾಫಿಕ್ಸ್ ಮಾದರಿಯ ಪರಿಕರಗಳು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರಗಳಲ್ಲಿ ಕಷ್ಟಕರವಾದ ಪರಿಕಲ್ಪನೆಗಳನ್ನು ಅತ್ಯಂತ ಸುಲಭವಾಗಿ ಅರ್ಥಮಾಡಿಕೊಳ್ಳಲು ಸಹಾಯಮಾಡುತ್ತವೆ. ಉದಾಹರಣೆಗೆಭೌತಿಕ ಸಂಪನ್ಮೂಲಗಳು ಲಭ್ಯವಿಲ್ಲದಿದ್ದರೂ ಸಹ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಡಿಜಿಟಲ್ ಪ್ರಯೋಗಗಳನ್ನು ಮಾಡಲು ವರ್ಚುವಲ್ ಲ್ಯಾಬ್‌ಗಳು ಅವಕಾಶ ನೀಡುತ್ತವೆ.

- **ಜಾಗತಿಕ ಸಹಯೋಗ ಮತ್ತು ನೆಟ್‌ವರ್ಕಿಂಗ್:** ಡಿಜಿಟಲ್ ಪ್ಲಾಟ್‌ಫಾರ್ಮ್‌ಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಜಗತ್ತಿನಾದ್ಯಂತ ಗೆಳೆಯರು ಮತ್ತು ಶಿಕ್ಷಕರೊಂದಿಗೆ ಸಹಯೋಗಿಸಿಕೊಳ್ಳಲು ಅನುಕೂಲ ಮಾಡಿಕೊಡುತ್ತವೆ. ವಿಡಿಯೋ ಕಾನ್ಫರೆನ್ಸಿಂಗ್, ಸಾಮಾಜಿಕ ಮಾಧ್ಯಮ ಗುಂಪುಗಳು ಮತ್ತು ಆನ್‌ಲೈನ್ ಚರ್ಚಾ ವೇದಿಕೆಗಳು ಶಿಕ್ಷಣದಲ್ಲಿ ವೈವಿಧ್ಯತೆಯನ್ನು ಬೆಳೆಸಿ ಕಲಿಕೆಯ ಅನುಭವಗಳನ್ನು ಸಕ್ರಿಯಗೊಳಿಸುತ್ತದೆ.

ಡಿಜಿಟಲ್ ಕಲಿಕೆಯ ಭವಿಷ್ಯ:

ದೇಶದಲ್ಲಿ ಡಿಜಿಟಲ್ ಕಲಿಕೆಯು ಸಬಲೀಕೃತ ಸಮಾಜವನ್ನು ನಿರ್ಮಾಣ ಮಾಡುವುದರಲ್ಲಿ ಸಂದೇಹವಿಲ್ಲ ಎಂದು ಮೇಲ್ಕಂಡ ಅಂಶಗಳಿಂದ ಹೇಳಬಹುದು. ಸಾಕ್ಷರತೆಯ ಪ್ರಮಾಣವನ್ನು ಹೆಚ್ಚಿಸುವುದಷ್ಟೇ ಅಲ್ಲದೆ ಜ್ಞಾನದ ಪರಿಭಾಷೆಯನ್ನು ಬದಲಿಸಿವುದು ಕೂಡ ಡಿಜಿಟಲ್ ಕಲಿಕೆಯ ಪ್ರಮುಖ ಗುರಿಯಾಗಿದೆ. ಡಿಜಿಟಲ್ ಇಂಡಿಯಾ ಕಾರ್ಯಕ್ರಮ ಅತೀ ದೊಡ್ಡ ಮತ್ತು ದೂರದೃಷ್ಟಿಯುಳ್ಳ ಕಾರ್ಯಕ್ರಮಗಳಲ್ಲಿ ಒಂದಾಗಿದೆ. ಇಂತಹ ಕಾರ್ಯಕ್ರಮಗಳ ಮೂಲಕ ಭಾರರತ ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರವು ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಪ್ರಮುಖ ಬೆಳವಣಿಗೆ ಮತ್ತು ಬದಲಾವಣೆಯಾಗುವುದರಿಂದ ಗ್ರಾಮೀಣ ವಿದ್ಯಾರ್ಥಿಗಳ ಜೀವನದಲ್ಲಿ ಸಾಮಾಜಿಕ ಮತ್ತು ಆರ್ಥಿಕ ವ್ಯತ್ಯಾಸವನ್ನು ತರುತ್ತದೆ.

ಸವಾಲುಗಳು:

ಆನ್‌ಲೈನ್ ಶಿಕ್ಷಣ ಕಲಿಕೆಯಲ್ಲಿ ಅನೇಕ ಸವಾಲುಗಳನ್ನು ನಾವು ಕಾಣಬಹುದು ಪ್ರಮುಖವಾಗಿ ಮೂಲ ಸೌಕರ್ಯ ಮತ್ತು ಹಾರ್ಡ್‌ವೇರ್ ಸೌಲಭ್ಯಗಳ ಕೊರತೆ. ಗ್ರಾಮೀಣ ಪ್ರದೇಶಗಳಲ್ಲಿ ನೆಟ್‌ವರ್ಕ್ ಸಮಸ್ಯೆ ಹೆಚ್ಚಾಗಿ ಕಂಡುಬರುವುದರಿಂದ

ಡಿಜಿಟಲ್ ಕಲಿಕೆಗೆ ಸ್ವಲ್ಪ ಅಡ್ಡಿಯಾಗಬಹುದು. ಗ್ರಾಮೀಣ ಪ್ರದೇಶಗಳಲ್ಲಿ ತಂತ್ರಜ್ಞಾನದ ಶಿಕ್ಷಣ ಬಹಳ ಕಡಿಮೆ ಇರುವುದರಿಂದ ಅಲ್ಲಿ ಡಿಜಿಟಲ್ ಕಲಿಕೆಯನ್ನು ಕಲಿಸುವುದು ಕಷ್ಟಕರವಾಗುತ್ತದೆ. ಇವುಗಳ ಜೊತೆಗೆ ಈ ಕೆಳಕಂಡ ಪ್ರಮುಖ ಸವಾಲುಗಳನ್ನು ನಾವು ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣದಲ್ಲಿ ಕಾಣಬಹುದು ಅವುಗಳೆಂದರೆ,

- ಡಿಜಿಟಲ್ ಡಿವ್ಶೆಡ್ (ವಿಭಜನೆ)
- ತಂತ್ರಜ್ಞಾನದ ಮೇಲೆ ಅತಿಯಾದ ಅವಲಂಬನೆ
- ದತ್ತಾಂಶ ಗೌಪ್ಯತೆ ಮತ್ತು ಭದ್ರತಾ ಸಮಸ್ಯೆಗಳು
- ಪರದೆಯ ಸಮಯ (ಸ್ಕ್ರೀನ್ ಟೈಮ್) ಮತ್ತು ಆರೋಗ್ಯದ ಸಮಸ್ಯೆಗಳು
- ಶಿಕ್ಷಕರ ಭಾವನಾತ್ಮಕ ಬೆಂಬಲದ ಕೊರತೆ

ಸಾರಾಂಶ:

ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಕಲಿಕೆಯ ಅವಕಾಶಗಳನ್ನು ಹೆಚ್ಚಿಸಿರುವುದರಲ್ಲಿ ಎರಡು ಮಾತಿಲ್ಲ. ಸಂವಾದಾತ್ಮಕ, ವೈಯಕ್ತಿಕರಿಸುವ, ತೊಡಗಿಸಿಕೊಳ್ಳುವ, ಹೊಂದಿಕೊಳ್ಳುವ ಕಲಿಕೆ ಹೀಗೆ ಹಲವಾರು ವಿಭಿನ್ನ ಕಲಿಕಾ ರೂಪಗಳನ್ನು ಪರಿಚಯಿಸುವುದರ ಮೂಲಕ ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ಹೊಸ ಕ್ರಾಂತಿಯನ್ನು ಸೃಷ್ಟಿಮಾಡಿದೆ. ಆದಾಗ್ಯೂ, ಅದರ ಪ್ರಭಾವವು ಸವಾಲುಗಳಿಲ್ಲದೆಯೇ ಇಲ್ಲ. ವಿಶೇಷವಾಗಿ ಡಿಜಿಟಲ್ ವಿಭಜನೆ, ತಂತ್ರಜ್ಞಾನದ ಮೇಲೆ ಅತಿಯಾದ ಅವಲಂಬನೆ ಮತ್ತು ತರಬೇತಿ ಅವಶ್ಯಕತೆ. ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಶಿಕ್ಷಣದಲ್ಲಿ ತನ್ನ ಸಾಮರ್ಥ್ಯವನ್ನು ಸಂಪೂರ್ಣವಾಗಿ ಅರಿತುಕೊಳ್ಳಲು ಶಿಕ್ಷಣ ತಜ್ಞರು ಅದರೊಂದಿಗಿರುವ ಸವಾಲುಗಳನ್ನು ಅರ್ಥಮಾಡಿಕೊಳ್ಳುವುದರ ಜೊತೆಗೆ ಡಿಜಿಟಲ್ ಶಿಕ್ಷಣದ ಪ್ರಯೋಜನವನ್ನು ಪಡೆಯಲು ವಿದ್ಯಾರ್ಥಿಗಳು ಮತ್ತು ಶಿಕ್ಷಕರು ಸಜ್ಜುಗೊಂಡಿದ್ದಾರೆಯೇ ಎಂಬುದನ್ನು ಖಚಿತಪಡಿಸಿಕೊಳ್ಳಬೇಕು. ಅದೇನೆ ಇರಲಿ ಡಿಜಿಟಲ್ ತಂತ್ರಜ್ಞಾನವು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರದಲ್ಲಿ ಅನೇಕ ಬದಲಾವಣೆಯನ್ನು ತಂದಿದೆ ಸಾಂಪ್ರದಾಯಿಕ ಶಿಕ್ಷಣ ಪದ್ಧತಿಗೆ ಸವಾಲು ಒಡ್ಡಿದೆ. ಭವಿಷ್ಯದಲ್ಲಿ ಆನ್ಲೈನ್ ಶಿಕ್ಷಣ ಸಮಾಜದ ಒಂದು ಅಂಗವಾಗುವುದರಲ್ಲಿ ಯಾವುದೇ ಅನುಮಾನವಿಲ್ಲ.

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ಡಿಜಿಟಲ್ ಕೌಶಲದ ಕೊರತೆ: ಪ್ರಜಾವಾಣಿ ಕನ್ನಡ ದಿನಪತ್ರಿಕೆ 31 ಜುಲೈ 2021

ಶಿಕ್ಷಣದಲ್ಲಿ ಕನ್ನಡ ಭಾಷಾಮಾಧ್ಯಮ : ಸವಾಲು, ಸಾಧ್ಯತೆಗಳು

ವಸುಂಧರಿ. ಎನ್

ಸಂಶೋಧನಾರ್ಥಿ, ಕನ್ನಡ ಭಾರತಿ ಕುವೆಂಪು ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಜ್ಞಾನಸಹ್ಯಾದ್ರಿ ಶಂಕರಘಟ್ಟ

ಮನುಕುಲದ ಬೆಳವಣಿಗೆಯ ಒಂದು ಹಂತದಲ್ಲಿ ಸಂವಹನ ಸಾಧನವಾಗಿ ಭಾಷೆ ಬೆಳೆಯಿತು. ಜಗತ್ತಿನ ವಿವಿಧೆಡೆ ನಾಗರಿಕತೆಗಳು ಸ್ಥಳೀಯ ಸ್ಥಿತಿ–ಗತಿಗೆ ಅನುಗುಣವಾಗಿ ರೂಪುಗೊಂಡಂತೆ ವಿವಿಧ ಭಾಷೆಗಳೂ ವಿಕಸನಗೊಂಡವು. ವಿಶ್ವಸಂಸ್ಥೆಯ ಒಂದು ಅಧ್ಯಯನದ ಪ್ರಕಾರ 1900 ರಲ್ಲಿ 10,000 ಭಾಷೆಗಳು ಬಳಕೆಯಲ್ಲಿದ್ದವಂತೆ. ಆದರೆ ಇಂದು 6,700 ಭಾಷೆಗಳು ಮಾತ್ರ ಉಳಿದಿವೆ. ಉಳಿದಿರುವ ಭಾಷೆಗಳ ಪೈಕಿ ಶೇಕಡಾ 50 ರಷ್ಟು ಭಾಷೆಗಳನ್ನು ಮಾತ್ರ ಮಕ್ಕಳಿಗೆ ಕಲಿಸಲಾಗುತ್ತಿದೆ. ಮಿಕ್ಕ ಭಾಷೆಗಳು ನಶಿಸಿ ಹೋಗುವ ಅಂಚಿನಲ್ಲಿವೆ. 2001ರ ಜನಗಣತಿಯ ಪ್ರಕಾರ ಭಾರತ ದೇಶದಲ್ಲಿ 122 ಪ್ರಮುಖ ಭಾಷೆಗಳು ಮತ್ತು 1,599 ಇತರೆ ಭಾಷೆಗಳು ಇವೆಯೆಂದು ಹೇಳಲಾಗಿದೆ. ಜಾಗತೀಕರಣದ ಪ್ರಭಾವಕ್ಕೆ ಕನ್ನಡವೂ ಸೇರಿದಂತೆ ಅನೇಕ ಭಾಷೆಗಳು ಬಲಿಯಾಗಿ ಸಂಕಷ್ಟದಲ್ಲಿವೆ. ಭಾಷೆ ಸತ್ತರೆ ಸಮಾಜದಲ್ಲಿ ಅಲ್ಲೋಲ–ಕಲ್ಲೋಲ ಉಂಟಾಗುತ್ತದೆ. ಒಂದು ಭಾಷೆಯನ್ನು ಕಳೆದುಕೊಂಡರೆ ಒಂದು ಜ್ಞಾನವನ್ನು, ಅನುಭವವನ್ನು, ಮೌಲ್ಯಗಳನ್ನು ಅನೇಕ ವಿಷಯಗಳಿಗೆ ಸಂಬಂಧಪಟ್ಟ ಮಾಹಿತಿಯನ್ನು ನಾವು ಕಳೆದುಕೊಂಡಂತೆ. ಹಾಗಾಗಿ ಜಗತ್ತಿನ ಎಲ್ಲಾ ಭಾಷೆಗಳನ್ನು ಉಳಿಸಿ ಬೆಳೆಸುವ ಕಾರ್ಯ ತುರ್ತಾಗಿ ನಡೆಯಬೇಕಾಗಿದೆ, ನಡೆಯುತ್ತಿದೆ ಕೂಡ. ಇದಕ್ಕೆ ನಿದರ್ಶನವಾಗಿ ತುಳು ಭಾಷೆ ಮತ್ತು ಲಿಪಿ ಇತ್ಯಾದಿ.

ಜಗತ್ತಿನ ಭಾಷಾ ತಜ್ಞರು, ಮಾನವಶಾಸ್ತ್ರಜ್ಞರು ಹಾಗೂ ಸಾಮಾಜಿಕ ಚಿಂತಕರು ಮಗುವಿನ ಮಾತೃಭಾಷೆಯಲ್ಲೇ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನು ನೀಡಬೇಕೆಂದು ಪ್ರತಿಪಾದಿಸಿದ್ದಾರೆ. ಮಾತೃಭಾಷೆಯಲ್ಲಿ ಶಿಕ್ಷಣವನ್ನು ನೀಡಿದಾಗ ಮಗು ಬಹುಬೇಗ ವಿಷಯವನ್ನು ಗ್ರಹಿಸುವುದಲ್ಲದೆ ಕಲಿಕೆಯಲ್ಲಿ ಮುಂದಿರುತ್ತದೆ. ಮಗುವಿನ ಚಿಂತನಾಕ್ರಮ, ಕ್ರಿಯಾಶೀಲತೆ, ವಾಕ್‌ಚಾತುರ್ಯ, ಅರಿವು ಉತ್ತಮಗೊಳ್ಳುತ್ತದೆ. ಭಾವನಾತ್ಮಕ ಗುಣಗಳು ಹಾಗೂ ವ್ಯಕ್ತಿತ್ವದ ವಿಕಸನಕ್ಕೆ ಸಹಾಯವಾಗುತ್ತದೆ. ತಂದೆ ತಾಯಿಗಳು ತಮ್ಮ ಮಗುವಿನ ಶಿಕ್ಷಣ ಕ್ರಮದಲ್ಲಿ ಪಾಲ್ಗೊಳ್ಳಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಮಾತೃಭಾಷೆಯ ಮಹತ್ವವನ್ನು ಅರಿತು 2000ದ ಇಸವಿಯಲ್ಲಿ ವಿಶ್ವಸಂಸ್ಥೆ ಪ್ರತಿವರ್ಷ ಫೆಬ್ರವರಿ ತಿಂಗಳು 21 ರಂದು ಅಂತರಾಷ್ಟ್ರೀಯ ಮಾತೃಭಾಷಾ ದಿನವನ್ನಾಗಿ ಆಚರಿಸಲು ಸದಸ್ಯ ರಾಷ್ಟ್ರಗಳಿಗೆ ಕರೆ ನೀಡಿತು.

ಕರ್ನಾಟಕದಲ್ಲಿ ಮಾತೃಭಾಷೆಯಲ್ಲಿ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣ ಕುರಿತ ಚರ್ಚೆಯ ಸುಮಾರು ಮೂರು ದಶಕಗಳಿಂದ ನಡೆಯುತ್ತಿದೆ. ಸರ್ಕಾರವು ಮಾತೃಭಾಷಾ ಶಿಕ್ಷಣದ ಪರವಾಗಿ ವಾದ ಮಂಡಿಸಿದರೆ, ಖಾಸಗಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದ ಪರವಾಗಿ ವಾದ ಮಂಡಿಸುತ್ತಾ ಇವೆ. 1989ರಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಒಂದು ಆದೇಶವನ್ನು ಹೊರಡಿಸಿ ಒಂದನೇ ತರಗತಿಯಿಂದ ನಾಲ್ಕನೇ ತರಗತಿಯವರೆಗೆ ಮಾತೃ ಭಾಷಾ ಮಾಧ್ಯಮದಲ್ಲಿ ಶಿಕ್ಷಣ ಇರಬೇಕೆಂದು ಹೇಳಿತು. ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದ ವಿದ್ಯಾರ್ಥಿಗಳ ಪೋಷಕರ ಸಂಘ ಸರ್ಕಾರದ ಆದೇಶವನ್ನು ನ್ಯಾಯಾಲಯದಲ್ಲಿ ಪ್ರಶ್ನಿಸಿತು. 1993ರಲ್ಲಿ ಭಾರತದ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯ ಸರ್ಕಾರದ ಆದೇಶವನ್ನು ಎತ್ತಿಹಿಡಿಯಿತು(1994 (1) Scc 550).

1998ರಲ್ಲಿ ಕರ್ನಾಟಕ ಸರ್ಕಾರ 1989ರ ಆದೇಶವನ್ನು ರದ್ದುಪಡಿಸಿ ಹೊಸ ಆದೇಶವನ್ನ ಹೊರಡಿಸಿತು. ಈ ಹೊಸ ಆದೇಶದ ಪ್ರಕಾರ ಕರ್ನಾಟಕದ ಎಲ್ಲ ಶಾಲೆಗಳಲ್ಲಿ ಒಂದನೇ ತರಗತಿಯಿಂದ ನಾಲ್ಕನೇ ತರಗತಿಯವರೆಗೆ ಶಿಕ್ಷಣವನ್ನು ಮಾತೃಭಾಷೆ ಅಥವಾ ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ನೀಡಬೇಕೆಂದು ಹೇಳಿತು. ಇಂಗ್ಲೀಷ್ ಮಾತೃಭಾಷಾ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಮಾತ್ರ ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮಕ್ಕೆ ಸೇರಿಸಿಕೊಳ್ಳಬಹುದು. ಕರ್ನಾಟಕ ಸರ್ಕಾರದ ಮಾನ್ಯತೆ ಪಡೆದ ಇತರೆ ಶಾಲೆಗಳು ಸರ್ಕಾರದ ಆದೇಶವನ್ನು ಪಾಲಿಸಬೇಕು. ತಪ್ಪಿದಲ್ಲಿ ಅಂತಹ ಶಾಲೆಗಳನ್ನು ಮುಚ್ಚಿಸಲಾಗುತ್ತೆ ಎಂದು ಹೇಳಿತು. ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದ ಶಾಲೆಗಳ ಆಡಳಿತ ಮಂಡಳಿಗಳ ಒಕ್ಕೂಟ 1999ರಲ್ಲಿ ಕರ್ನಾಟಕ ಉಚ್ಚನ್ಯಾಯಾಲಯದಲ್ಲಿ ರಿಟ್ ಅರ್ಜಿಯನ್ನು ಸಲ್ಲಿಸಿ ಸರ್ಕಾರದ ಆದೇಶವನ್ನ ಪ್ರಶ್ನಿಸಿತು. 14 ವರ್ಷಗಳ ನಂತರೆ ಕರ್ನಾಟಕದ ಉಚ್ಚನ್ಯಾಯಾಲಯದ ಮೂವರು ನ್ಯಾಯಮೂರ್ತಿಗಳ ಪೂರ್ಣ ಪೀಠ 2008ರಲ್ಲಿ ತೀರ್ಪನ್ನು ನೀಡಿ ಸರ್ಕಾರದ ಆದೇಶ ಸಂವಿಧಾನ ಬಾಹಿರವೆಂದು ರದ್ದುಗೊಳಿಸಿತು. (ILR 2008 Kar 2895). ಈ ತೀರ್ಪಿನ ವಿರುದ್ಧ ಕರ್ನಾಟಕ ಸರ್ಕಾರ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯದಲ್ಲಿ

ಮೇಲ್ಮನವಿಯನ್ನು ಸಲ್ಲಿಸಿತು. 2014ರಲ್ಲಿ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯ ಸರ್ಕಾರದ ಮೇಲ್ಮನವಿಯನ್ನ ವಜಾಗೊಳಿಸಿ ಉಚ್ಚನ್ಯಾಯಾಲಯದ ತೀರ್ಪನ್ನು ಎತ್ತಿ ಹಿಡಿಯಿತು (2014(9)Scc485). ನಂತರ ನ್ಯಾಯಾಲಯವು ತನ್ನ ತೀರ್ಪನ್ನು ಪುನರ್ ಪರಿಶೀಲಿಸಬೇಕೆಂದು ಸಲ್ಲಿಸಿದ ರಿವ್ಯೂ ಅರ್ಜಿ ಮತ್ತು ಕೊರಿಟ್ಟಿವ್ ಅರ್ಜಿಯ ಸಹ ವಜಾಗೊಂಡಿದೆ. ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯದ ತೀರ್ಪು ಅಂತಿಮ ಮತ್ತು ನಾವೆಲ್ಲರು ಅದಕ್ಕೆ ಬದ್ಧರಾಗಿರಬೇಕು ಎನ್ನುವುದರಲ್ಲಿ ಎರಡು ಮಾತಿಲ್ಲ.

ಆದರೆ ದೇಶದ ಸಾರ್ವಜನಿಕರು ನ್ಯಾಯಾಂಗದ ತೀರ್ಪುಗಳನ್ನು ವಿಮರ್ಶಿಸುವ ಸ್ವಾತಂತ್ರ್ಯವಿದೆ. ವಿಮರ್ಶೆ ಅನಾರೋಗ್ಯಕರ ಮತ್ತು ವಿನಾಶಕಾರಿಯಾಗಿರಬಾರದು. ನ್ಯಾಯಾಂಗದ ವ್ಯವಸ್ಥೆಯ ಮೇಲೆ ಜನತೆ ಇಟ್ಟಿರುವ ನಂಬಿಕೆಯನ್ನ ಬುಡಮೇಲ ಮಾಡುವಂತಿರಬಾರದು. ನ್ಯಾಯಾಂಗದ ತಪ್ಪುಗಳನ್ನು ಸರಿಪಡಿಸಿ ಉತ್ತಮ ಸ್ಥಿತಿಗೆ ಕೊಂಡೊಯ್ಯುವಂತೆ ವಿಮರ್ಶೆ ಇರಬೇಕು. ಈ ಚೌಕಟ್ಟಿನ ಒಳಗೆ 2008ರಲ್ಲಿ ಕರ್ನಾಟಕ ಉಚ್ಚನ್ಯಾಯಾಲಯ ನೀಡಿದ ತೀರ್ಪನ್ನು ಮತ್ತು 2014ರಲ್ಲಿ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯದ ತೀರ್ಪನ್ನು ವಿಮರ್ಶೆಗೆ ಒಳಪಡಿಸಿ ನೋಡಬೇಕಾಗಿದೆ.

ಭಾರತದ ಗಣರಾಜ್ಯದಲ್ಲಿ ಭಾಷಾವಾರು ರಾಜ್ಯಗಳನ್ನು ವಿಂಗಡಿಸಲಾಗಿದೆ. ಒಂದೊಂದು ರಾಜ್ಯದಲ್ಲಿ ತನ್ನದೇ ಪ್ರಾದೇಶಿಕ ಭಾಷೆ ಇದೆ. ರಾಜ್ಯಗಳಲ್ಲಿ ಶಾಲಾ ಶಿಕ್ಷಣದ ಮಾಧ್ಯಮ ಯಾವ ಭಾಷೆಯಲ್ಲಿ ಇರಬೇಕು ಎನ್ನುವ ಪ್ರಶ್ನೆ ಬಂದಾಗ ದೇಶದ ಎಲ್ಲಾ ರಾಜ್ಯಗಳ ಅಭಿಪ್ರಾಯವನ್ನು ಪಡೆಯುವ ಅಗತ್ಯ ಇದೆ. ಆದರೆ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯ ಕರ್ನಾಟಕ ರಾಜ್ಯವನ್ನು ಹೊರತುಪಡಿಸಿ ಬೇರೆ ರಾಜ್ಯಗಳ ಅಭಿಪ್ರಾಯವನ್ನು ಪಡೆಯದೆ ಎಲ್ಲಾ ರಾಜ್ಯಗಳಿಗೆ ಸಂಬಂಧಿಸಿದ ವಿಷಯವಾದ ಭಾಷಾ ಮಾಧ್ಯಮದ ಬಗ್ಗೆ ತೀರ್ಪು ನೀಡಿರುವುದು ಸಂವಿಧಾನದ ಮೂಲ ತತ್ವಗಳಿಗೆ ವಿರುದ್ಧವಾದದ್ದು.

ನಮ್ಮ ಸಂವಿಧಾನದಲ್ಲಿ ನಮಗೆ ಮೂಲಭೂತ ಹಕ್ಕುಗಳನ್ನು ನೀಡಲಾಗಿದೆ. ಅನುಚ್ಛೇದ 19(1) (a)ರಲ್ಲಿ ಅಭಿವ್ಯಕ್ತಿ ಸ್ವಾತಂತ್ರ್ಯದ ಹಕ್ಕನ್ನು ಮತ್ತು ಅನುಚ್ಛೇದ 19(1)(g)ರಲ್ಲಿ ಯಾವುದೇ ಕಸುಬು, ವ್ಯವಹಾರದ ಅಥವಾ ವ್ಯಾಪಾರವನ್ನು ಮಾಡುವ ಹಕ್ಕನ್ನು ನೀಡಲಾಗಿದೆ. ನ್ಯಾಯಾಲಯ ಅನುಚ್ಛೇದ 19(1) (a)ನ್ನ ವ್ಯಾಖ್ಯಾನ ಮಾಡುತ್ತ ಪೋಷಕರು ಅಥವಾ ವಿದ್ಯಾರ್ಥಿಗಳು ಯಾವ ಭಾಷೆಯಲ್ಲಿ ಶಿಕ್ಷಣ ಮಾಧ್ಯಮ ಇರಬೇಕೆಂದು ತೀರ್ಮಾನಿಸುವ ಹಕ್ಕು ಅಭಿವ್ಯಕ್ತಿ ಸ್ವಾತಂತ್ರ್ಯದಲ್ಲಿ ಒಳಗೊಂಡಿದೆ ಎಂದು ಹೇಳಿದೆ. ಇದೇ ರೀತಿ ಅನುಚ್ಛೇದ 19(1)(g) ನ್ನು ವ್ಯಾಖ್ಯಾನ ಮಾಡುತ್ತ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಯನ್ನು ಸ್ಥಾಪಿಸುವ ಖಾಸಗಿ ಆಡಳಿತ ವರ್ಗಕ್ಕೆ ಶಿಕ್ಷಣ ಮಾಧ್ಯಮ ಯಾವ ಭಾಷೆಯಲ್ಲಿ ಇರಬೇಕೆಂದು ತೀರ್ಮಾನಿಸುವ ಹಕ್ಕು ಇದೆ ಎಂದು ಹೇಳಿದೆ. ಈ ಹಿಂದೆ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯ ಅನೇಕ ತೀರ್ಪುಗಳಲ್ಲಿ ಸಂವಿಧಾನದಲ್ಲಿ ನೀಡಿರುವ ಮೂಲಭೂತ ಹಕ್ಕುಗಳನ್ನು, ಪೂರ್ಣಹಕ್ಕುಗಳಲ್ಲ, ಬದಲಾಗಿ ಅವುಗಳ ವಿವೇಚನೆಯಲ್ಲ ನಿರ್ಬಂಧಕ್ಕೆ ಒಳಪಟ್ಟಿವೆಯೆಂದು ವ್ಯಾಖ್ಯಾನಿಸಿದೆ. ಸರ್ಕಾರ ಸಮಾಜದ ಹಿತದೃಷ್ಟಿಯಿಂದ ಮಕ್ಕಳ ಹಿತದೃಷ್ಟಿಯಿಂದ ಅನುಚ್ಛೇದ 19(1)(a) ಮತ್ತು 19(1)(g)ರಲ್ಲಿ ಮೂಲಭೂತ ಹಕ್ಕುಗಳ ಮೇಲೆ ನಿರ್ಬಂಧವನ್ನು ವಿಧಿಸುವ ಹಕ್ಕು ಸರ್ಕಾರ ಹೊಂದಿದೆಯೆಂಬ ಅಂಶವನ್ನು ನ್ಯಾಯಾಲಯಗಳು ಗಣನೆಗೆ ತೆಗೆದುಕೊಳ್ಳದೆ ಇರುವುದು ಒಂದು ದುರಂತವೇ ಸರಿ.

ಅನುಚ್ಛೇದ 30ರಲ್ಲಿ ಧಾರ್ಮಿಕ ಮತ್ತು ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರು ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳನ್ನು ಸ್ಥಾಪಿಸಿಕೊಳ್ಳುವ ಹಕ್ಕನ್ನು ನೀಡಿದೆ. ಈ ಅನುಚ್ಛೇದವನ್ನು ವ್ಯಾಖ್ಯಾನ ಮಾಡುತ್ತ ಧಾರ್ಮಿಕ ಮತ್ತು ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರು ತಮ್ಮ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳಲ್ಲಿ ಶಿಕ್ಷಣದ ಮಾಧ್ಯಮ ಯಾವ ಭಾಷೆಯಲ್ಲಿ ಇರಬೇಕೆಂದು ತೀರ್ಮಾನಿಸುವ ಹಕ್ಕು ಹೊಂದಿದೆ ಎಂದು ಹೇಳಿದೆ. ಈ ಹಕ್ಕಿನ ಮೇಲೆ ನಿರ್ಬಂಧ ಹೇರುವುದು ಸಂವಿಧಾನ ಬಾಹಿರವೆಂದು ವ್ಯಾಖ್ಯಾನ ಮಾಡಿದೆ. ಆದರೆ ವಾಸ್ತವವಾಗಿ ಈ ಸಂಸ್ಥೆಗಳು ಅಲ್ಪಸಂಖ್ಯಾತರನ್ನು ವಂಚಿಸುತ್ತಿವೆ. ಕೆಲವು ಉರ್ದು ಮಾಧ್ಯಮದ ಪ್ರಾಥಮಿಕ ಶಾಲೆಗಳನ್ನ ಬಿಟ್ಟರೆ ಉಳಿದಂತೆ ಎಲ್ಲಾ ಧಾರ್ಮಿಕ ಮತ್ತು ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು ಇಂಗ್ಲೀಷಿನಲ್ಲಿ ನಡೆಯುತ್ತಿವೆ. ಈ ಸಂಸ್ಥೆಗಳು ಇಂಗ್ಲೀಷ್ ಶಿಕ್ಷಣವನ್ನು ಮಾರುವ ವ್ಯಾಪಾರದ ಅಂಗಡಿಗಳಾಗಿವೆ. ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರಾಗಲಿ ಅಥವಾ ಧಾರ್ಮಿಕ ಅಲ್ಪಸಂಖ್ಯಾತರಾಗಲಿ ತಮ್ಮ ಭಾಷೆಗಳ ಮೂಲಕ ಶಿಕ್ಷಣವನ್ನು ಪಡೆಯದೆ ಅವರ ಧಾರ್ಮಿಕ, ಭಾಷಿಕ ಮತ್ತು ಸಾಂಸ್ಕೃತಿಕ ಹಿತವನ್ನು ಕಾಪಾಡುವಲ್ಲಿ ವಿಫಲಗೊಂಡಿವೆ ಎಂಬ ಕಟುಸತ್ಯವನ್ನು ನ್ಯಾಯಾಲಯಗಳು ಗಣನೆಗೆ ತೆಗೆದುಕೊಳ್ಳಲೇ ಇಲ್ಲ.

ಸರ್ಕಾರದ ಭಾಷಾ ನೀತಿಯನ್ನು ಅದು ನಡೆಸುವ ಮತ್ತು ಅದರಿಂದ ಅನುದಾನವನ್ನು ಪಡೆಯುವ ಶಾಲೆಗಳು ಕಡ್ಡಾಯವಾಗಿ ಪಾಲಿಸುವಂತೆ ಮಾಡುವ ಅಧಿಕಾರ ಸರ್ಕಾರಕ್ಕೆ ಇದೆ. ಆದರೆ ಖಾಸಗಿ ಅನುದಾನರಹಿತ, ಧಾರ್ಮಿಕ ಮತ್ತು ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರ ಶಾಲೆಗಳ ಮೇಲೆ ಸರ್ಕಾರಕ್ಕೆ ತನ್ನ ಭಾಷಾ ನೀತಿಯನ್ನು ಹೇರಲು ಯಾವ ಅಧಿಕಾರ ಇಲ್ಲ ಎಂದಿದೆ. ಈ ರೀತಿಯ ಸರ್ಕಾರಿ ಶಾಲೆಗಳಿಗೆ ಒಂದು ನೀತಿ, ಖಾಸಗಿ ಶಾಲೆಗಳಿಗೆ ಮತ್ತೊಂದು ನೀತಿ ಸಮಾಜದಲ್ಲಿ ಅಸಮಾನತೆಯನ್ನ ಹೆಚ್ಚಿಸುತ್ತದೆ. ನಗರ ಮತ್ತು ಗ್ರಾಮೀಣ ಇಂಗ್ಲೀಷ್ ಭಾಷೆ ಬಲ್ಲವರ, ಬಲ್ಲದವರ, ಗಣಕೀಕರಣ ಗೊತ್ತಿರುವವರ, ಗೊತ್ತಿಲ್ಲದವರ, ತಂತ್ರಜ್ಞಾನ ಹೊಂದಿದವರ, ಹೊಂದಿಲ್ಲದವರ ಮಧ್ಯೆ ಅಂತರ ಹೆಚ್ಚುವುದಕ್ಕೆ ಅಸಮಾನ ಶಿಕ್ಷಣ ಮತ್ತು ಭಾಷಾ ನೀತಿಯು ಕಾರಣವಾಗುತ್ತದೆ. ಗುಣಾತ್ಮಕ ಶಿಕ್ಷಣ ಮತ್ತು ಸಮಾನ ಶಿಕ್ಷಣ ಎಂಬ ಜನತೆಯ ಕೂಗನ್ನು ನ್ಯಾಯಾಲಯ ಪರಿಗಣಿಸಲೇ ಇಲ್ಲ. ಸಂವಿಧಾನದ ಮೂಲತತ್ವವಾದ ಸಮಾನತೆಗೆ ವಿರುದ್ಧವಾದ ವ್ಯಾಖ್ಯಾನವನ್ನು ನ್ಯಾಯಾಲಯಗಳು ನೀಡಿರುವುದು ಆಶ್ಚರ್ಯದ ಸಂಗತಿ.

ಜಾಗತೀಕರಣ ನಮ್ಮ ದೇಶದ ಎಲ್ಲಾ ಕ್ಷೇತ್ರಗಳ ಮೇಲೆ ಪ್ರಭಾವವನ್ನು ಬೀರಿದೆ. ನ್ಯಾಯಾಂಗ ಈ ಪ್ರಭಾವದಿಂದ ಹೊರತಲ್ಲ, ಜಾಗತೀಕರಣ ನಮ್ಮ ಸಂವಿಧಾನ ಮತ್ತು ಕಾನೂನುಗಳ ಮೇಲೆ ದಾಳಿ ಮಾಡುತ್ತಿದೆ. ಇತ್ತೀಚಿನ ವರ್ಷಗಳಲ್ಲಿ ಕಾನೂನುಗಳ ರಚನೆ ಮತ್ತು ಕಾನೂನುಗಳ ವ್ಯಾಖ್ಯಾನ ಜಾಗತೀಕರಣದ ಪ್ರಭಾವಕ್ಕೆ ಒಳಗಾಗಿದೆ. ಈ ತೀರ್ಪುಗಳಲ್ಲಿ ವೈಯಕ್ತಿಕ ಹಕ್ಕುಗಳಿಗೆ ಮತ್ತು ಖಾಸಗಿಯವರ ಹಕ್ಕುಗಳಿಗೆ ಮಹತ್ವವನ್ನು ನೀಡಲಾಗಿದೆ. ವೈಯಕ್ತಿಕ ಹಿತ ಸಮಾಜದ ಹಿತಕ್ಕೆ ಶರಣಾಗಬೇಕೆಂಬ ತತ್ವಕ್ಕೆ ಮಾನ್ಯತೆ ಸಿಗಲೇ ಇಲ್ಲ. ಸಂವಿಧಾನದ ಆಶಯಗಳಾದ ಬಹುಜನರ ಕಲ್ಯಾಣ, ಸಮತೆ, ಸಮಾನತೆ ಮತ್ತು ಸಾಮಾಜಿಕ ನ್ಯಾಯ ಇತ್ಯಾದಿಗಳನ್ನು ಕಡೆಗಣಿಸಲಾಗಿದೆ.

ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣವೆಂದರೆ ಕೇವಲ ಶಾಲಾ ಕಟ್ಟಡಗಳು, ಪೀಠೋಪಕರಣಗಳು, ಮೂಲಸೌಕರ್ಯಗಳು, ಶಿಕ್ಷಕರ ನೇಮಕಾತಿ ಇತ್ಯಾದಿಗಳು ಮಾತ್ರವಲ್ಲ. ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣ, ಪಠ್ಯವಿಷಯಗಳು ಮತ್ತು ಅವುಗಳನ್ನ ಬೋಧಿಸುವ ಭಾಷಾ ಮಾಧ್ಯಮದ ಮೇಲೆ ಅವಲಂಬಿತವಾಗಿರುತ್ತದೆ. ಪಠ್ಯವಿಷಯ ಮತ್ತು ಭಾಷಾ ಮಾಧ್ಯಮ ಮಗುವಿನ, ಪೋಷಕರ ಹಾಗೂ ಸರ್ಕಾರದ ನಡುವಿನ ಸಂಬಂಧಗಳನ್ನ ಉತ್ತಮಪಡಿಸುವಂತೆ ಇರಬೇಕು. ಪಠ್ಯವಿಷಯವು ಮಗುವನ್ನು ಉತ್ತಮ ಕುಟುಂಬ ಸದಸ್ಯನನ್ನಾಗಿ, ದೇಶದ ಉತ್ತಮ ಪ್ರಜೆಯಾಗಿಯೂ ಮತ್ತು ವಿಶ್ವಮಾನವನನ್ನಾಗಿ ರೂಪಿಸಬೇಕು. ಅತ್ಯಂತ ಪ್ರಮುಖ ವಿಷಯಗಳಾದ ಪಠ್ಯವಿಷಯ ಮತ್ತು ಭಾಷಾ ಮಾಧ್ಯಮವನ್ನು ಖಾಸಗಿ ಶಾಲೆಗಳ ಮರ್ಜಿಗೆ ಬಿಡುವಂತಿಲ್ಲ. ಸಂವಿಧಾನದ ಮೂಲತತ್ವಗಳನ್ನ ಸಾಧಿಸುವಂತೆ ಪಠ್ಯ ಮತ್ತು ಭಾಷಾ ವಿಷಯಗಳನ್ನು ಸರ್ಕಾರವೇ ಮಾಡಬೇಕಾದದ್ದು ಸಂವಿಧಾನಾತ್ಮಕ ಕರ್ತವ್ಯ ಭಾಷಾತಜ್ಞರು, ಮಾನವಶಾಸ್ತ್ರಜ್ಞರು ಮತ್ತು ಸಮಾಜ ಚಿಂತಕರೂ ಸಹ ಮಾತೃಭಾಷೆಯಲ್ಲಿ ಶಿಕ್ಷಣದ ಮಾಧ್ಯಮ ಇರಬೇಕೆಂದು ಅಭಿಪ್ರಾಯಪಟ್ಟಿದ್ದಾರೆ. ನ್ಯಾಯಾಲಯಗಳು ಇದನ್ನು ಗಮನಿಸಿದರೂ ಗಣನೆಗೆ ತೆಗೆದುಕೊಳ್ಳದೆ ಇರುವುದು ವಿಷಾದನೀಯ.

ಸವಾಲುಗಳು :

ಕನ್ನಡ ಭಾಷೆಯಿಂದಲೇ ಅಸ್ಮಿತೆಯನ್ನು ಪಡೆದುಕೊಂಡಿರುವ ಕರ್ನಾಟಕದಲ್ಲಿ ಕನ್ನಡವನ್ನು ಉಳಿಸಿ ಬೆಳೆಸುವ ಬಗ್ಗೆ ಆಂದೋಲನಗಳು ನಡೆಯಬೇಕಾಗಿ ಬಂದಿರುವುದು ಕಾಲದ ವಿಪರ್ಯಾಸವೇ ಇರಬೇಕು. ಕನ್ನಡದ ಅಳಿವು–ಉಳಿವಿನ ಪ್ರಶ್ನೆ ಬಂದಾಗಲೆಲ್ಲ ಶಿಕ್ಷಣದ ವಿಚಾರ ಮುನ್ನೆಲೆಗೆ ಬರುತ್ತದೆ. ಏಕೆಂದರೆ ಒಂದು ಭಾಷೆಯ ವರ್ತಮಾನ ಮತ್ತು ಭವಿಷ್ಯದ ಚರ್ಚೆಗಳಲ್ಲಿ ಶಿಕ್ಷಣದ ಪಾತ್ರ ತುಂಬ ದೊಡ್ಡದು. ಇಲ್ಲಿ ನಾವು ಶಿಕ್ಷಣದಲ್ಲಿ ಕನ್ನಡವನ್ನು ಬಳಸುವ ಸವಾಲು ಹಾಗೂ ಸಾಧ್ಯತೆಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಬೇಕಾಗಿದೆ. 'ಶಿಕ್ಷಣದಲ್ಲಿ ಕನ್ನಡ' ಎಂಬ ವಿಚಾರವನ್ನು ಎರಡು ಆಯಾಮಗಳಿಂದ ನೋಡಬಹುದು. ಮೊದಲನೆಯದು, ಭಾಷೆಯಾಗಿ ಕನ್ನಡವನ್ನು ಕಲಿಯುವುದು; ಎರಡನೆಯದು, ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಕಲಿಯುವುದು.

ಸಮಾಜದ ಒಂದು ಭಾಗ ಕನ್ನಡದಲ್ಲಿ ಉತ್ತಮ ಸಾಹಿತ್ಯ ಕೃತಿಗಳನ್ನು ರಚಿಸುತ್ತ ಭಾಷೆ ಹಾಗೂ ಸಾಹಿತ್ಯದ ಬೆಳವಣಿಗೆಗೆ ತನ್ನ ಕೊಡುಗೆಯನ್ನು ನೀಡುತ್ತಿದ್ದರೆ, ಇನ್ನೊಂದೆಡೆ ಭಾಷೆಯ ಬಗ್ಗೆ ತೀವ್ರ ಅನಾದರ ಹಾಗೂ ಅನಾಸಕ್ತಿಯನ್ನು ಹೊಂದಿರುವ ಮಂದಿಯನ್ನು ಇಂದು ನಾವು ಕಾಣುತ್ತಿದ್ದೇವೆ. ವಿಶ್ವವಿದ್ಯಾನಿಲಯ ಹಂತದಲ್ಲಿ ಶಿಕ್ಷಣ ಪಡೆಯುತ್ತಿರುವವರಲ್ಲೂ ಸಾಕಷ್ಟು ಮಂದಿ ಸ್ವತಂತ್ರವಾದ, ಅರ್ಥಪೂರ್ಣ, ತಪ್ಪಿಲ್ಲದ ಒಂದು ಕನ್ನಡ ವಾಕ್ಯ ಬರೆಯುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಹೊಂದಿಲ್ಲ. ವಿಪರೀತವಾದ ಕಾಗುಣಿತ ತಪ್ಪುಗಳು, ವಾಕ್ಯರಚನೆಯ ದೋಷಗಳು ನಮ್ಮನ್ನು ಕಂಗೆಡಿಸುತ್ತವೆ. ಜ್ಞಾನಸಂಪಾದನೆಯ ವಿಷಯ

ಹಾಗಿರಲಿ, ಕಡೇಪಕ್ಷ ತಪ್ಪಿಲ್ಲದೆ ತಮ್ಮ ಮಾತೃಭಾಷೆಯನ್ನು ಬಳಸುವ ಸಾಮರ್ಥ್ಯವನ್ನಾದರೂ ನಮ್ಮ ಯುವಕರು ಏಕೆ ಕರಗತ ಮಾಡಿಕೊಂಡಿಲ್ಲ ಎಂಬ ಆತಂಕ ಸಮಾಜದ ಪ್ರಜ್ಞಾವಂತರನ್ನು ಕಾಡದೆ ಇರದು.

ಇಂತಹ ಪರಿಸ್ಥಿತಿಗೆ ಏನು ಕಾರಣವೆಂದು ಪ್ರಶ್ನೆಮಾಡಿದರೆ, ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳು ಕಾಲೇಜುಗಳತ್ತಲೂ, ಕಾಲೇಜುಗಳು, ಪ್ರೌಢಶಾಲೆಗಳತ್ತಲೂ, ಪ್ರೌಢಶಾಲೆಗಳು ಪ್ರಾಥಮಿಕ ಶಾಲೆಗಳತ್ತಲೂ ಬೊಟ್ಟು ಮಾಡುವುದು ನಡೆದೇ ಇದೆ. ಅಂದರೆ ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಪ್ರಾಧ್ಯಾಪಕರು ಸ್ನಾತಕ ಮತ್ತು ಪದವಿಪೂರ್ವ ಉಪನ್ಯಾಸಕರು ಸರಿಯಾಗಿ ಕನ್ನಡ ಕಲಿಸಿಲ್ಲ ಎಂದು ಟೀಕಿಸುವುದು, ಕಾಲೇಜು ಉಪನ್ಯಾಸಕರು ಪ್ರೌಢಶಾಲೆಗಳಲ್ಲಿ ಸರಿಯಾಗಿ ಕನ್ನಡ ಕಲಿಸಿಲ್ಲ ಎಂದು ದೂರುವುದು ಅವರು ಪ್ರಾಥಮಿಕ ಶಾಲೆಗಳ ಮೇಷ್ಟ್ರುಗಳು ಸರಿಯಾದ ರೀತಿಯಲ್ಲಿ ಪಾಠಮಾಡಿಲ್ಲ ಎಂದು ತೆಗಳುವುದು ಸರ್ವೇಸಾಮಾನ್ಯವಾಗಿದೆ. ಸಮಸ್ಯೆಗಳ ವಿಚಾರ ಬಂದಾಗ ಒಬ್ಬರು ಇನ್ನೊಬ್ಬರತ್ತ ಕೈತೋರಿಸುವುದು ಹೊಸದೇನಲ್ಲ. ಆದರೆ ಇದು ಅಷ್ಟಕ್ಕೇ ಬಿಟ್ಟುಬಿಡಬಹುದಾದ ವಿಚಾರ ಅಲ್ಲ. ಏಕೆಂದರೆ ಇದು ಶಿಕ್ಷಣಕ್ಕೆ ಹಾಗೂ ಸಮಾಜದ ಒಟ್ಟಾರೆ ಭವಿಷ್ಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆ.

ಕನ್ನಡದ ಕಲಿಕೆ ಈ ಬಗೆಯ ಕಳವಳಕಾರಿ ಪರಿಸ್ಥಿತಿಯನ್ನು ತಲುಪುದಕ್ಕೆ ಯಾರು ಕಾರಣ ಎಂಬ ಚರ್ಚೆಗಿಂತಲೂ, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕನ್ನಡವನ್ನು ಸಮರ್ಥವಾಗಿ ಕಲಿಸುವ ಜವಾಬ್ದಾರಿ ಶಿಕ್ಷಣದ ಎಲ್ಲ ಹಂತದಲ್ಲೂ ಇದೆ ಎಂಬುದನ್ನು ಒಪ್ಪಿಕೊಳ್ಳುವುದು ಮುಖ್ಯ. ಭಾಷೆಯನ್ನು ಕಲಿಸುವುದು ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಶಿಕ್ಷಕರ ಜವಾಬ್ದಾರಿಯೆಂದು ಹೇಳಿ ಉಳಿದವರು ಕೈತೊಳೆದುಕೊಳ್ಳುವುದು ಸರಿಯಲ್ಲ. ಆದರೂ ಬುನಾದಿ ಸರಿ ಇರಬೇಕು ಎಂದು ಅಪೇಕ್ಷಿಸುವುದರಲ್ಲಿ ತಪ್ಪಿಲ್ಲ. ಆರಂಭದಲ್ಲೇ ಸರಿಯಾದುದನ್ನು ಹೇಳಿಕೊಡದೇ ಹೋದರೆ ತಪ್ಪಾಗಿರುವುದೇ ಭದ್ರವಾಗುತ್ತದೆ ಮತ್ತು ಅದೇ ಮುಂದುವರಿಯುತ್ತದೆ. ಕಾಲೇಜು ಹಂತದಲ್ಲಿ ಬರವಣಿಗೆಯಲ್ಲಿ ಕಾಗುಣಿತ ತಪ್ಪು, ವಾಕ್ಯರಚನೆಯ ದೋಷಗಳನ್ನು ಮಾಡುವ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಬಹುತೇಕರಿಗೆ ತಾವು ಬರೆಯುತ್ತಿರುವುದು ತಪ್ಪು ಎಂಬುದನ್ನ ಮನದಟ್ಟು ಮಾಡುವುದೇ ದೊಡ್ಡ ಸಾಹಸವೆನಿಸಿದೆ. 'ನಮಗೆ ಕಲಿಸಿದ್ದೇ ಹೀಗೆ ಸಾರ್' ಎಂದು ಎಷ್ಟೋ ವಿದ್ಯಾರ್ಥಿಗಳು ಹೇಳುವುದನ್ನು ಕೇಳಿದ್ದೇನೆ. ಈ ಆರಂಭದ ಕಲಿಕೆಯದೋಷ ಎಷ್ಟು ತೀವ್ರವೆಂದರೆ ಈ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಸರಿಯಾದ ಒಂದು ಪಠ್ಯವನ್ನು ನಕಲು ಮಾಡಲೂ ಬರುವುದಿಲ್ಲ. ಕಣ್ಣೆದುರೇ ಇರುವ ಪಠ್ಯವೊಂದನ್ನು ನೋಡಿ ಟಿಪ್ಪಣಿ ಮಾಡಲು ಹೇಳಿದರೂ ಅದರಲ್ಲಿ ಹತ್ತಾರು ತಪ್ಪುಗಳು ನುಸುಳಿರುತ್ತವೆ. ಇದು ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಲ್ಲೇ ಆರಂಭವಾದ ಸಮಸ್ಯೆ ಎಂಬುದು ನಿಸ್ಸಂಶಯ ಎಂದರೆ, ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಲ್ಲೇ ಉತ್ತಮ ಕನ್ನಡವನ್ನು ಕಲಿಸುವ ಸಮರ್ಥ ಶಿಕ್ಷಕರ ಕೊರತೆ ನಮ್ಮಲ್ಲಿ ಇದೆ ಎಂದಾಯಿತು. ಇದು ಕಡೆಗಣಿಸಲಾಗದ ಒಂದು ಗಂಭೀರ ಸವಾಲೇ ಹೌದು.

ಇನ್ನೊಂದು ಸೂಕ್ಷ್ಮವಾದ ವಿಚಾರವೆಂದರೆ, ಪ್ರಾಥಮಿಕ ಶಾಲೆಯನ್ನೂ ಒಳಗೊಂಡಂತೆ ಶಿಕ್ಷಣದ ವಿವಿಧ ಹಂತಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಹಾಜರಾತಿಯ ಸಮಸ್ಯೆ ಇದೆ. ಎಷ್ಟೋ ಮಕ್ಕಳು ನಿಯಮಿತವಾಗಿ ತರಗತಿಗಳಿಗೆ ಹೋಗುವುದೇ ಇಲ್ಲ. ಶಾಲೆಗೆ ದಾಖಲಾಗುವುದು, ಪರೀಕ್ಷೆ ಬರೆಯುವುದು, ಮುಂದಿನ ತರಗತಿಗೆ ಪ್ರವೇಶ ಪಡೆಯುವುದು ಇಷ್ಟಕ್ಕೇ ಮಾತ್ರ ಪ್ರಾಮುಖ್ಯತೆ ಕೊಡುವ ಸಾವಿರಾರು ಮಕ್ಕಳು ನಮ್ಮಲ್ಲಿದ್ದಾರೆ. ಇದಕ್ಕೆ ಬಡತನ, ಮಕ್ಕಳೂ ಹೆತ್ತವರೊಂದಿಗೆ ದುಡಿಮೆಯಲ್ಲಿ ಕೈಜೋಡಿಸುವ ಅನಿವಾರ್ಯತೆ ಇತ್ಯಾದಿ ಮಾನವೀಯ ಮುಖವೂ ಇದೆ. ಆದರೆ ವಿದ್ಯಾರ್ಥಿಗಳು ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಲ್ಲೇ ನಿಯಮಿತವಾಗಿ ತರಗತಿಗೆ ಹಾಜರಾಗದೆ ಇದ್ದಾಗ ಅವರಿಗೆ ಉತ್ತಮ ಭಾಷಾ ಕೌಶಲಗಳ ಪಾಠ ದೊರೆಯುವುದು ಕಷ್ಟವೇ. ಇದು ಮುಂದಿನ ಹಂತಗಳಲ್ಲಾದರೂ ಸರಿ ಹೋಗದೆ ಇದ್ದಾಗ ಅವರು ಮುಖ್ಯವಾಹಿನಿಯೊಂದಿಗೆ ಸೇರುವುದೇ ಇಲ್ಲ.

ಭಾಷಾ ಬಳಕೆಯಲ್ಲಿ ಪ್ರಾದೇಶಿಕ ವಿಭಿನ್ನತೆಯ ಇನ್ನೊಂದು ವಿಷಯವನ್ನೂ ಇಲ್ಲಿ ಪ್ರಸ್ತಾಪಿಸಬಹುದು. ಕರ್ನಾಟಕದಲ್ಲಿ ಹಲವು ಕನ್ನಡಗಳಿವೆ. ಒಂದು ಪ್ರದೇಶದಿಂದ ಇನ್ನೊಂದು ಪ್ರದೇಶಕ್ಕೆ ಭಾಷಾ ಬಳಕೆ ವ್ಯತ್ಯಾಸವಾಗುತ್ತದೆ, ಆದರೆ ಪಠ್ಯಪುಸ್ತಕ ಒಂದೇ ಇರುತ್ತದೆ. ತಾವು ರೂಢಿಯಲ್ಲಿ ಆಡುವ ಮಾತಿಗೂ, ಪಠ್ಯಪುಸ್ತಕದ ಭಾಷೆಗೂ ವ್ಯತ್ಯಾಸವಿದೆ ಎಂಬುದನ್ನು ಅನೇಕ ವಿದ್ಯಾರ್ಥಿಗಳು ಗಮನಿಸುವುದಿಲ್ಲ. ಭಾಷಾ ವೈವಿಧ್ಯತೆಗಳನ್ನು ಗೌರವಿಸುವುದು, ಒಂದು ಪ್ರಾಮಾಣಿಕ ಭಾಷೆಯನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವುದು ಎರಡೂ ಪ್ರಮುಖ ಸಂಗತಿಗಳೇ ಇವೆರಡನ್ನೂ ಸಮತೋಲನದಿಂದ ಒಯ್ಯುವುದು ಒಂದು ದೊಡ್ಡ ಸವಾಲೇ.

ಇಂಜಿನಿಯರಿಂಗ್ ನಂತರ ಕೋರ್ಸುಗಳಲ್ಲಿ ಒಂದು ಭಾಷೆಯಾಗಿ ಕನ್ನಡವನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವುದು ಕಡ್ಡಾಯವಾಗಿದ್ದರೂ, ಬಹುತೇಕ ಕಡೆ ಅದೊಂದು ಕಾಟಾಚಾರವಾಗಿ ಉಳಿದಿರುವುದು ಸುಳ್ಳಲ್ಲ. ಅಲ್ಲಿ ಕನ್ನಡ ಕಲಿಕೆಗೆ ಎಷ್ಟು ಪೂರಕವಾದ ವಾತಾವರಣ ಇದೆ, ಪ್ರಾಧಾನ್ಯತೆ ಇದೆ, ಪರೀಕ್ಷೆಗಳನ್ನು ಎಷ್ಟು ಆಸ್ಥೆಯಿಂದ ಮಾಡುತ್ತಾರೆ ಎಂಬುದೆಲ್ಲವೂ ವಿದ್ಯಾರ್ಥಿಗಳ ಮನಸ್ಥಿತಿಯನ್ನು ನಿರ್ಧರಿಸುತ್ತದೆ.

ಉಳಿದಂತೆ, ಅಂಕಗಳಿಕೆಯ ಉದ್ದೇಶಕ್ಕೆ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಸಿದ್ಧಪಡಿಸುವ ಖಾಸಗಿ ಕಾಲೇಜುಗಳೆಂಬ ಕಾರ್ಖಾನೆಗಳಲ್ಲಿ ಭಾಷೆಯ ಬಗ್ಗೆ ಅನಾದರ ಇದೆ. ಅಲ್ಲಿ ಭೌತಶಾಸ್ತ್ರ, ರಸಾಯನಶಾಸ್ತ್ರ, ಗಣಿತ ಇತ್ಯಾದಿ ವಿಜ್ಞಾನದ ವಿಷಯಗಳಿಗಷ್ಟೇ ಮನ್ನಣೆ; ಭಾಷೆಯ ಬಗ್ಗೆ ಉಪೇಕ್ಷೆ. ಅವರಿಗೆ ಭಾಷಾ ಶಿಕ್ಷಕರು 'ಬಿಟ್ಟ ಸ್ಥಳ ತುಂಬುವುದಕ್ಕಷ್ಟೇ' ಬೇಕು. ಆಡಳಿ ಮಂಡಳಿಗಳ ಈ ಮನಸ್ಥಿತಿ ಸಹಜವಾಗಿಯೇ ವಿದ್ಯಾರ್ಥಿಗಳ ಮನಸ್ಥಿತಿಯನ್ನೂ ನಿರ್ಧರಿಸುತ್ತದೆ. ತಮಗೆ 'ಕೋರ್ ಸಬ್ಜೆಕ್ಟ್'ಗಳು ಮಾತ್ರ ಮುಖ್ಯ. ಭಾಷಾ ವಿಷಯಗಳಲ್ಲಿ ತೇರ್ಗಡೆಯಾದರೆ ಸಾಕು ಎಂಬ ಧೋರಣೆಯನ್ನು ಅವರೂ ಬೆಳೆಸಿಕೊಂಡರೆ ಭಾಷಾ ವಿಷಯಗಳ ಅಧ್ಯಾಪಕರ ಗತಿ ದೇವರಿಗೇ ಪ್ರೀತಿ.

ಮಾಧ್ಯಮವಾಗಿ ಕನ್ನಡ

ಕನ್ನಡ ಮಾಧ್ಯಮ ಶಿಕ್ಷಣದ ವಿಷಯವೂ ಮೇಲ್ನೋಟಕ್ಕೆ ಕಾಣುವಷ್ಟು ಸರಳ ಅಲ್ಲ. ಇದಕ್ಕೆ ಕಾನೂನು ಹಾಗೂ ಮನಸ್ಥಿತಿ ಎಂಬ ಎರಡು ಮುಖಗಳಿವೆ. ಕನ್ನಡ ಮಾಧ್ಯಮಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಕಾನೂನಿನ ಹೋರಾಟಕ್ಕೆ ದಶಕಗಳ ಇತಿಹಾಸ ಇದೆ. 1980ರ ದಶಕದ ಗೋಕಾಕ ವರದಿಯ ಬಳಿಕ ಕನ್ನಡ ಮಾಧ್ಯಮದ ಶಿಕ್ಷಣಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸಾಕಷ್ಟು ಹೋರಾಟಗಳು ನಡೆದಿವೆ. ಇವುಗಳ ಫಲವೆಂಬಂತೆ, 4ನೇ ತರಗತಿಯವರೆಗೆ ಮಾತೃಭಾಷೆ ಅಥವಾ ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯಲ್ಲಿ ಶಿಕ್ಷಣ ನೀಡುವುದನ್ನು ಕಡ್ಡಾಯಗೊಳಿಸಿ 1994ರಲ್ಲಿ ರಾಜ್ಯ ಸರ್ಕಾರ ಆದೇಶ ನೀಡಿತು. ಆದರೆ ಇದರ ವಿರುದ್ಧ ಖಾಸಗಿ ಶಾಲೆಗಳು ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯದ ಮೊರೆ ಹೊಕ್ಕವು. ಈ ನಡುವೆ 2006ರಲ್ಲಿ, ಎಲ್ಲ ಕನ್ನಡ ಮಾಧ್ಯಮ ಮತ್ತು ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರ ಶಾಲೆಗಳಲ್ಲಿ 1ನೇ ತರಗತಿಯಿಂದಲೇ ಇಂಗ್ಲೀಷನ್ನು ಒಂದು ಭಾಷೆಯಾಗಿ ಕಲಿಸಬೇಕೆಂದು ರಾಜ್ಯ ಸರ್ಕಾರ ಇನ್ನೊಂದು ಆದೇಶ ಹೊರಡಿಸಿತು. 2014ರಲ್ಲಿ ಸುಪ್ರಿಂ ಕೋರ್ಟ್, ತೀರ್ಪು ನೀಡಿ, 'ಭಾಷಾ ಮಾಧ್ಯಮದ ಆಯ್ಕೆ ಪೋಷಕರ ವಿವೇಚನೆಗೆ ಬಿಟ್ಟದ್ದು, ಸರ್ಕಾರ ಬಲವಂತ ಮಾಡುವಂತಿಲ್ಲ' ಎನ್ನುವ ಮೂಲಕ ಪ್ರಾಥಮಿಕ ಶಾಲೆಯಲ್ಲಿ ಕನ್ನಡ ಮಾಧ್ಯಮವನ್ನು ಕಡ್ಡಾಯ ಮಾಡುವಂತಿಲ್ಲ ಎಂಬ ಒತ್ತಾಯಕ್ಕೆ ಬೆಂಬಲವಾಗಿ ನಿಂತಿತು. ಅಲ್ಲಿಗೆ ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನಾದರೂ ನೀಡಬೇಕೆಂಬ ಚಿಂತನೆಗೆ ಬಲವಾದ ಹಿನ್ನಡೆ ಉಂಟಾಯಿತು. ವಾಸ್ತವವಾಗಿ ಕನ್ನಡ ಮಾಧ್ಯಮದ ವಿಷಯ ಕೇವಲ ಕಾನೂನಿಗೆ ಸಂಬಂಧಿಸಿದ್ದಲ್ಲ. ಅದು ಮನಸ್ಥಿತಿಗೆ ಸಂಬಂಧಿಸಿದ್ದು. ಯಾವ ಮಾಧ್ಯಮವನ್ನೂ ಬಲವಂತವಾಗಿ ಹೇರುವಂತಿಲ್ಲ ಎಂದು ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯ ಹೇಳಿರುವಾಗ ತಮ್ಮ ಮಕ್ಕಳಿಗೆ ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಶಿಕ್ಷಣ ಕೊಡುವ ಅವಕಾಶವೂ ಹೆತ್ತವರಿಗಿದೆ ಎಂದಾಯಿತು. ಆ ಅವಕಾಶವನ್ನು ಉಪಯೋಗ ಮಾಡಿಕೊಳ್ಳುವ ಮನಸ್ಥಿತಿ ಎಷ್ಟು ಮಂದಿಗಿದೆ?

ಯುನೇಸ್ಕೋ ಒಳಗೊಂಡಂತೆ ಎಲ್ಲ ಸ್ತರದ ಸಂಸ್ಥೆಗಳು, ಶಿಕ್ಷಣ ತಜ್ಞರು ಮಾತೃಭಾಷೆಯ ಶಿಕ್ಷಣವನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತಲೇ ಬಂದಿದ್ದಾರೆ. "ಮಾನಸಿಕ ಬೆಳವಣಿಗೆ ಹಾಗೂ ಚಿಂತನೆಗಳನ್ನು ಬಲಪಡಿಸುವುದಕ್ಕೆ ತಾಯ್ನುಡಿ ಸಹಕಾರಿ. ಇದು ಪರಿಕಲ್ಪನಾತ್ಮಕ ಯೋಚನೆಯನ್ನು ಬೆಳೆಸುತ್ತದೆ" ಎಂದು ಯುನೇಸ್ಕೋ ಹೇಳಿದೆ. ಪೋಷಕರಿಗೆ ಇರುವ ಮೂರು ಬಗೆಯ ತಪ್ಪು ಕಲ್ಪನೆಗಳ ಬಗ್ಗೆ ಅದು ಹೇಳುತ್ತದೆ:

1. ಮಕ್ಕಳಿಗೆ ಇಂಗ್ಲೀಷ್ ಕಲಿಸುವ ಅತ್ಯುತ್ತಮ ರೀತಿ ಎಂದರೆ ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದಲ್ಲೇ ಕಲಿಸುವುದು.
2. ಇಂಗ್ಲೀಷ್ ಕಲಿಕೆಯನ್ನು ಎಷ್ಟು ಬೇಗ ಸಾಧ್ಯವೋ ಅಷ್ಟು ಬೇಗ ಆರಂಭಿಸಬೇಕು.
3. ಇಂಗ್ಲೀಷ್ ಕಲಿಕೆಗೆ ಮಾತೃಭಾಷೆ ಅಡ್ಡಿಯಾಗುತ್ತದೆ.

ಈ ತಪ್ಪುಕಲ್ಪನೆಯೇ ನಮ್ಮ ಜನರನ್ನು ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದ ಕುರಿತು ಅತಿಯಾದ ವ್ಯಾಮೋಹ ಹೊಂದುವಂತೆ ಮಾಡಿದೆ. ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಕಲಿತರೆ ಭವಿಷ್ಯ ಇಲ್ಲ, ಉತ್ತಮ ಉದ್ಯೋಗಾವಕಾಶಗಳು ದೊರೆಯುವುದಿಲ್ಲ ಎಂಬ ಯೋಚನೆ ಸಮಾಜದ ಬಹುಪಾಲು ಮಂದಿಯಲ್ಲಿ ಭದ್ರವಾಗಿ ಬೇರೂರಿದೆ. ಆದರೆ ಇದಕ್ಕೆ ಯಾವುದೇ ಆಧಾರ ಇಲ್ಲ ಎಂಬುದನ್ನು ಇನ್ಫೋಸಿಸ್ ಅನ್ನು ಹುಟ್ಟುಹಾಕಿದ ನಾರಾಯಣ ಮೂರ್ತಿ, ಭಾರತರತ್ನ ಸಿ.ಎನ್.ಆರ್. ರಾವ್, ಉದ್ಯಮಿ ಕ್ಯಾ ಗೋಪಿನಾಥ್ ಮೊದಲಾದ ಗಣ್ಯಾತಿಗಣ್ಯರು ಸಾಬೀತುಪಡಿಸಿದ್ದಾರೆ. ಆದರೆ ಜನರು ಇದನ್ನು ಒಪ್ಪಿಕೊಳ್ಳುವ ಮನಸ್ಥಿತಿಯಲ್ಲಿ ಇಲ್ಲ. ಇದರ ಬೀಜ ಭಾರತಕ್ಕೆ ಇಂಗ್ಲೀಷ್ ಶಿಕ್ಷಣವನ್ನು ತಂದ ಮೆಕಾಲೆಯ ಚಿಂತನೆಯಲ್ಲೇ ಇದೆ. ಇದನ್ನು ಅಳಿಸಿಹಾಕುವುದೋ ಪರಿವರ್ತನೆ ತರುವುದೋ ಅಷ್ಟು ಸುಲಭದ ಕೆಲಸ ಅಲ್ಲ.

ಇಂಗ್ಲೀಷ್ ಮಾತೃಭಾಷೆಯಲ್ಲದ ಯಾವ ದೇಶದಲ್ಲೂ ಶಿಕ್ಷಣದ ಮಾಧ್ಯಮ ಇಂಗ್ಲೀಷ್ ಅಲ್ಲ ಎಂಬುದನ್ನು ನಾವು ಗಮನಿಸಬೇಕು. ಅಲ್ಲಿ ಇಂಗ್ಲೀಷ್ ಶ್ರೇಷ್ಠ, ಅದರಿಂದಲೇ ಜನರ ಉದ್ಧಾರ ಎಂಬ ಮನಸ್ಥಿತಿಯೇ ಇಲ್ಲ. "ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದ

ಶಿಕ್ಷಣವು ಗ್ರಹಿಕೆಯ ಅಭಿವೃದ್ಧಿಯನ್ನು, ವಿಚಾರದ ಖಚಿತತೆಯನ್ನು, ಅಭಿಪ್ರಾಯಗಳ ಸ್ಪಷ್ಟತೆಯನ್ನು ಕುಂಠಿತಗೊಳಿಸುತ್ತದೆ. ವಿಚಾರಗಳ ಶ್ರೀಮಂತ ಪರಂಪರೆಯನ್ನು ಅರ್ಥ ಮಾಡಿಕೊಳ್ಳುವುದಕ್ಕೆ ಮಾತ್ರವಲ್ಲ, ತಮ್ಮನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ, ಸ್ಪಷ್ಟವಾಗಿ ಮತ್ತು ಸರಳವಾಗಿ ಅಭಿವ್ಯಕ್ತಿಗೊಳಿಸುವುದಕ್ಕೆ ಮಾತೃಭಾಷೆಯೇ ಸಹಕಾರಿ" ಎಂದು ಮಹಾತ್ಮ ಗಾಂಧೀಜಿ ಬಹಳ ಹಿಂದೆಯೇ ಹೇಳಿದ್ದಾರೆ.

ಸಾಧ್ಯತೆಗಳು :

ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಕಲಿತವರೂ ಒಳ್ಳೆಯ ಉದ್ಯೋಗ ಪಡೆದು, ಸಾಧನೆ ಮಾಡಿ ಸಮಾಜದಲ್ಲಿ ಉನ್ನತ ಸ್ಥಾನಮಾನ ಪಡೆಯಬಹುದು ಎಂಬುದು ಸಿದ್ಧವಾಗುವವರೆಗೆ ಇಂಗ್ಲೀಷ್ ಮೇಲಿನ ವ್ಯಾಮೋಹ ಕರಗದು, ಕನ್ನಡದ ಮೇಲಿನ ಅಭಿಮಾನ ಗಟ್ಟಿಯಾಗದು. ಕನ್ನಡ ಅನ್ನದ ಭಾಷೆಯಾಗುವುದು ಇಂದಿನ ಅನಿವಾರ್ಯತೆ. ಹಾಗೆಂದು ಇದು ಒಂದೆರಡು ದಿನಗಳಲ್ಲಿ ಆಗುವ ಕೆಲಸ ಅಲ್ಲ.

ಪ್ರಾಥಮಿಕ ಶಾಲೆಯಿಂದಲೇ ಮಕ್ಕಳಲ್ಲಿ ಕನ್ನಡದ ಬಗ್ಗೆ ಪ್ರೀತಿ, ಅಭಿಮಾನ ಬೆಳೆಸುವ ಕೆಲಸ ಆಗಬೇಕು. ಅದನ್ನು ಅಧ್ಯಾಪಕರು, ಹೆತ್ತವರು ಮನಃಪೂರ್ವಕವಾಗಿ ಮಾಡಬೇಕು. ಮನೆಯಲ್ಲೂ, ಸಂಬಂಧಿಕರ ನಡುವೆಯೂ ಮಕ್ಕಳೊಂದಿಗೆ ಇಂಗ್ಲೀಷಿನಲ್ಲಿ ಮಾತನಾಡುವ, ಮಕ್ಕಳೂ ಹಾಗೆಯೇ ವರ್ತಿಸುವುದು ಪ್ರತಿಷ್ಠೆಯ ವಿಚಾರ ಎಂದು ತಿಳಿಯುವ ಪೋಷಕರಿರುವವರೆಗೆ ಈ ಬದಲಾವಣೆ ಆರಂಭವಾಗುವುದೇ ಕಷ್ಟ. ಕಲಿಕೆಯ ಪ್ರತೀ ಹಂತದಲ್ಲೂ ಕನ್ನಡ ಭಾಷೆಯನ್ನು ಉತ್ತಮಪಡಿಸುವ, ಅದರ ಕುರಿತು ಪ್ರೀತಿಯನ್ನು ಬೆಳೆಸುವ ಜವಾಬ್ದಾರಿಯನ್ನು ಎಲ್ಲ ಹಂತದ ಅಧ್ಯಾಪಕರೂ ವಹಿಸಿಕೊಳ್ಳಬೇಕು. ಕನ್ನಡದ ಬಗ್ಗೆ ಕಾಳಜಿ ಇರುವವರು, ಮಕ್ಕಳಿಗೆ ಕನ್ನಡ ಕಲಿಸಬೇಕಾದವರು ಕನ್ನಡ ಅಧ್ಯಾಪಕರು ಮಾತ್ರ ಎಂಬ ಧೋರಣೆಯೂ ತೊಲಗಬೇಕು. ಶಾಲಾ ಕಾಲೇಜುಗಳಲ್ಲಿ ಭಾಷಾ ಶಿಕ್ಷಕರಿಗೆ ಉಳಿದ ಶಿಕ್ಷಕರಷ್ಟೇ ಪ್ರಾಧಾನ್ಯತೆ ದೊರೆತಾಗ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲೂ ಭಾಷೆ ಪ್ರಮುಖವಾದದ್ದು ಎಂಬ ಮನಸ್ಸು ದೃಢವಾಗುತ್ತದೆ.

ಕನ್ನಡವನ್ನು ಅನ್ನದ ಭಾಷೆಯಾಗಿಸುವಲ್ಲಿ ಸರೋಜಿನಿ ಮಹಿಷಿ ವರದಿ ಜಾರಿಗೆಯಲ್ಲಿ ಪರಿಣಾಮಕಾರಿಯಾದ ಪಾತ್ರವಿದೆ. ಸರೋಜಿನಿ ಮಹಿಷಿ ವರದಿಯ ಸ್ಥಳೀಯರಿಗೆ ಉದ್ಯೋಗಾವಕಾಶ ಹೆಚ್ಚಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಕೆಲವು ಪ್ರಮುಖ ಸಲಹೆಗಳನ್ನು ನೀಡಿದೆ. ಉದಾಹರಣೆಗೆ 'ಎ' ಗುಂಪಿನ ಉದ್ಯೋಗಗಳಲ್ಲಿ ಶೇ. 65ನ್ನು 'ಬಿ' ಗುಂಪಿನ ಹುದ್ದೆಗಳಲ್ಲಿ ಶೇ. 80ನ್ನೂ ಸ್ಥಳೀಯರಿಗೆ ಮೀಸಲಿಡಬೇಕು, 'ಸಿ' ಗುಂಪಿನ ಹುದ್ದೆಗಳಲ್ಲಿ ಶೇ. 100ನ್ನು ಸ್ಥಳೀಯರಿಗೇ ನೀಡಬೇಕು ಎಂಬ ಶಿಫಾರಸು ಸಮರ್ಪಕವಾಗಿ ಜಾರಿಗೆ ಬಂದಲ್ಲಿ ಕನ್ನಡ ಮಾಧ್ಯಮದ ಅಭ್ಯರ್ಥಿಗಳ ಉದ್ಯೋಗಾವಕಾಶ ಹೆಚ್ಚಾಗಬಹುದು. ಆದರೆ ನಾವು ಕೇವಲ ಉದ್ಯೋಗಾವಕಾಶಗಳಿಗಾಗಿ ಹಕ್ಕು ಮಂಡಿಸಿದರೆ ಸಾಲದು, ಆಧುನಿಕ ಕಾಲ ಬಯಸುವ ಜ್ಞಾನವನ್ನೂ ಕೌಶಲವನ್ನೂ ರೂಢಿಸಿಕೊಳ್ಳುವುದು ಅನಿವಾರ್ಯ. ಕನ್ನಡ ಮಾಧ್ಯಮವನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತಾ ಹೆಚ್ಚು ಉದ್ಯೋಗಾವಕಾಶಗಳನ್ನು ಅಪೇಕ್ಷಿಸುತ್ತಾ ಆಧುನಿಕ ಕಾಲ ಬಯಸುವ ಜ್ಞಾನ – ಕೌಶಲಗಳನ್ನು ನಮ್ಮ ಮಕ್ಕಳು ರೂಢಿಸಿಕೊಳ್ಳದೇ ಹೋದರೆ ನಮ್ಮ ಪ್ರತಿಪಾದನೆಗಳಲ್ಲಿ ಯಾವ ತಿರುಳೂ ಉಳಿಯುವುದಿಲ್ಲ.

ಕನ್ನಡ ಭಾಷೆಯ ಅಳಿವು–ಉಳಿವು ಕೇವಲ ಕಾನೂನಿನ ಕೆಲಸವೂ ಅಲ್ಲ, ಸರ್ಕಾರದ ಕೆಲಸವೂ ಅಲ್ಲ. ಅದು ಎಲ್ಲರೂ ಸೇರಿ ಮಾಡಬೇಕಾದ ಕೆಲಸ. ಧೋರಣೆಯಲ್ಲಿ ಆಗಬೇಕಾದ ಬದಲಾವಣೆಯ ವಿಚಾರ. ಎಲ್ಲವನ್ನೂ ಸರ್ಕಾರ ಮತ್ತು ಕಾನೂನು ಮಾಡುತ್ತದೆಂದು ನಿರೀಕ್ಷಿಸುತ್ತಾ ಕೂರಲಾಗದು. ಕನ್ನಡ ಮಾಧ್ಯಮ ಶಿಕ್ಷಣಕ್ಕೆ ಕಟಿಬದ್ಧವಾಗಿರುವ ಸುಳ್ಯದ 'ಸ್ನೇಹ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆ'ಯಂತಹ ಪ್ರಯತ್ನಗಳು ನಮಗೆ ಸ್ಫೂರ್ತಿಯಾಗಬೇಕು.

ಮಕ್ಕಳ ಉನ್ನತ ಶಿಕ್ಷಣ, ವಿದೇಶಿ ಓದು, ವಿದೇಶಿ ಉದ್ಯೋಗ ಮತ್ತು ಅನಂತರದ ಅವರ ಆರ್ಥಿಕಾಭಿವೃದ್ಧಿ ಇತ್ಯಾದಿಗಳು ಪೋಷಕರಲ್ಲಿ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಇಂಗ್ಲೀಷ್ ಬಗ್ಗೆ ವ್ಯಾಮೋಹ ಬೆಳೆಸಿಕೊಳ್ಳಲು ಕಾರಣವಾಗಿವೆ. ಆದ್ದರಿಂದ ಭಾಷಾ ಸಮಸ್ಯೆಯ ಹಿಂದೆ ಉದ್ಯೋಗ ಮತ್ತು ಆರ್ಥಿಕ ಮತ್ತು ಸಾಮಾಜಿಕ ವ್ಯವಸ್ಥೆಯನ್ನು ಪುನರ್ ಸಂಘಟಿಸಿ ಎಲ್ಲರಿಗೂ ಶಿಕ್ಷಣ, ಎಲ್ಲರಿಗೂ ಉದ್ಯೋಗ ಮತ್ತು ಸೂಕ್ತವಾದ ಆರ್ಥಿಕ ವರಮಾನ ಸಿಗುವಂತೆ ಮಾಡಬೇಕಾಗಿದೆ.

ಇಂದು ಇಂಗ್ಲೀಷ್ ಭಾಷೆ ಅಂತರಾಷ್ಟ್ರೀಯ ಮಟ್ಟದಲ್ಲಿ ವ್ಯಾಪಕವಾಗಿ ಬೆಳೆದು ವ್ಯವಹಾರ, ವಿಜ್ಞಾನ, ತಂತ್ರಜ್ಞಾನ, ಮಾಹಿತಿ ತಂತ್ರಜ್ಞಾನ ಇತ್ಯಾದಿಗಳ ವಿಸ್ತರಣೆಗೆ ಹೆದ್ದಾರಿಯಾಗಿದೆ. ಆದ್ದರಿಂದ ಇಂಗ್ಲೀಷ್ ಭಾಷೆಗೆ ಪ್ರಾಮುಖ್ಯತೆಯನ್ನು ಕೊಡಲೇಬೇಕು. ಆದರೆ ಕನ್ನಡಕ್ಕೆ ಬದಲಿಯಾಗಿ ಇಂಗ್ಲೀಷ್ ಆಗಕೂಡದು. ಕನ್ನಡತನದ ಮೂಲಕವೇ ಇಂಗ್ಲೀಷ್ನ್ನು ಬಳಸಿಕೊಂಡರೆ ಉತ್ತಮ.

ಸ್ವಾತಂತ್ರ್ಯ ನಂತರ ನಾವು ಸಾಕ್ಷರತೆಯಲ್ಲಿ ಗಣನೀಯ ಸಾಧನೆಯನ್ನು ಮಾಡಿದ್ದೇವೆ. ಆದರೆ ಇಂದು ಗುಣಾತ್ಮಕ ಮತ್ತು ಸಮಾನ ಶಿಕ್ಷಣ ಎಂಬ ಎರಡು ಸವಾಲುಗಳನ್ನು ಶಿಕ್ಷಣ ಕ್ಷೇತ್ರ ಎದುರಿಸುತ್ತದೆ. ಸಮಗ್ರ ಶಿಕ್ಷಣ ನೀತಿಯನ್ನು ರೂಪಿಸುವಲ್ಲಿ ನಮ್ಮ ಸರ್ಕಾರಗಳು ವಿಫಲವಾಗಿವೆ. ಭಾಷಾ ಸಮಸ್ಯೆಯನ್ನು ಒಳಗೊಂಡಂತೆ, ಗುಣಾತ್ಮಕ ಮತ್ತು ಸಮಾನ ಶಿಕ್ಷಣವನ್ನು ಸಾಧಿಸಲು ಹೊಸ ಶಿಕ್ಷಣ ಪದ್ಧತಿ ಮತ್ತು ವ್ಯವಸ್ಥೆಯನ್ನು ರೂಪಿಸಬೇಕಾಗಿದೆ. ಮಾತೃಭಾಷೆ ಮತ್ತು ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯ ಬಗ್ಗೆ ಇರುವ ಗೊಂದಲವನ್ನು ಸರಿಪಡಿಸಿ, ಮಾತೃಭಾಷೆಯನ್ನು ರಾಜ್ಯ ಭಾಷೆಯನ್ನು ಕಡ್ಡಾಯಗೊಳಿಸುವ ನೆಲೆಯಲ್ಲಿ ಹೊಸ ಶಿಕ್ಷಣ ನೀತಿ ಜಾರಿಗೆ ಬರಬೇಕಾಗಿದೆ.

ಪರಾಮರ್ಶನ ಗ್ರಂಥಗಳು

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ಪ್ರಸಕ್ತ ಕರ್ನಾಟಕದಲ್ಲಿ ಕನ್ನಡದ ಸ್ಥಿತಿಗತಿ

ಡಾ. ಹನುಮಂತಪ್ಪ ಬ್ಯಾಡಗಿ

ಕನ್ನಡ ಉಪನ್ಯಾಸಕರು, ಬಿ.ಎ.ಜೆ.ಎಸ್.ಎಸ್. ಮಹಿಳಾ ಮಹಾವಿದ್ಯಾಲಯ, ಹಲಗೇರಿ ರಸ್ತೆ, ರಾಣೇಬೆನ್ನೂರು.

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ABSTRACT

ಪ್ರಸಕ್ತ ಕರ್ನಾಟಕದಲ್ಲಿ ಕನ್ನಡವೆಂಬ ಭಾಷೆಯಿಂದಲೇ ಅಸ್ಮಿತೆಯನ್ನು ಪಡೆದುಕೊಂಡಿರುವ ಕರ್ನಾಟಕದಲ್ಲಿ ಕನ್ನಡವನ್ನು ಉಳಿಸಿ ಬೆಳೆಸುವ ಬಗ್ಗೆ ಇಂದು ಆಂದೋಲನಗಳು ನಡೆಯಬೇಕಾಗಿ ಬಂದಿರುವುದು ಕಾಲದ ವಿಪರ್ಯಾಸವೇ ಸರಿ. ಕನ್ನಡದ ಅಳಿವು–ಉಳಿವಿನ ಪ್ರಶ್ನೆ ಬಂದಾಗಲೆಲ್ಲಾ ಶಿಕ್ಷಣದ ವಿಚಾರ ಮುನ್ನೆಲೆಗೆ ಬರುತ್ತದೆ. ಏಕೆಂದರೆ ಒಂದು ಭಾಷೆಯ ವರ್ತಮಾನ ಮತ್ತು ಭವಿಷ್ಯದ ಚರ್ಚೆಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ಮಹತ್ತದ ಪಾತ್ರ ವಹಿಸುತ್ತದೆ. ನಾವು ಶಿಕ್ಷಣದಲ್ಲಿ ಕನ್ನಡವನ್ನು ಬಳಸಬಹುದಾದ ಸವಾಲು ಹಾಗೂ ಸಾಧ್ಯತೆಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಬೇಕಾಗಿದೆ. 'ಶಿಕ್ಷಣದಲ್ಲಿ ಕನ್ನಡ' ಎಂಬ ವಿಚಾರವನ್ನು ಎರಡು ಆಯಾಮಗಳಿಂದ ನೋಡಬಹುದು. ಮೊದಲನೆಯದು, ಭಾಷೆಯಾಗಿ ಕನ್ನಡವನ್ನು ಕಲಿಯುವುದು; ಎರಡನೆಯದು, ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಕಲಿಯುವುದು. ಅನ್ನದ ಭಾಷೆಯಾಗಿ ಕನ್ನಡ ಕುರಿತು ಚರ್ಚೆಮಾಡೋಣ.

ಭಾಷೆಯಾಗಿ ಕನ್ನಡ ಕಲಿಕೆಯ ಸ್ಥಿತಿಗತಿ:

ಸಮಾಜದ ಒಂದು ಭಾಗವಾದ ಕನ್ನಡ ಉತ್ತಮ ಸಾಹಿತ್ಯ ಕೃತಿಗಳನ್ನು ರಚಿಸುತ್ತಾ ಭಾಷೆ ಹಾಗೂ ಸಾಹಿತ್ಯದ ಬೆಳವಣಿಗೆಗೆ ತನ್ನದೆ ಕೊಡುಗೆಯನ್ನು ನೀಡುತ್ತಿದ್ದರೆ, ಮತೊಂದೆಡೆಗೆ ಭಾಷೆಯ ಬಗ್ಗೆ ತೀವ್ರ ಅನಾದರ ಹಾಗೂ ಅನಾಸಕ್ತಿಯನ್ನು ಹೊಂದಿರುವ ಮಂದಿಯನ್ನು ಸಹ ನಾವು ನೋಡಬಹುದು. ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳಲ್ಲಿ ಶಿಕ್ಷಣ ಪಡೆಯುತ್ತಿರುವವರಲ್ಲೂ ಬಹಳಷ್ಟುಮಂದಿ ಸ್ವತಂತ್ರವಾಗಿ, ಅರ್ಥಪೂರ್ಣವಾಗಿ, ತಪ್ಪಿಲ್ಲದೆ ಒಂದು ಕನ್ನಡ ವಾಕ್ಯ ಬರೆಯುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಹೊಂದಿಲ್ಲ. ಅದರಲ್ಲಿ ವಿಪರೀತವಾದ ಕಾಗುಣಿತ, ವಾಕ್ಯರಚನೆಯಂತಹ ದೋಷಗಳನ್ನು ಕಾಣಬಹುದು. ಜ್ಞಾನಸಂಪಾದನೆಯ ವಿಷಯ ದೂರದಮಾತು, ಕಡೇಪಕ್ಷ ತಪ್ಪಿಲ್ಲದೆ ತಮ್ಮ ಮಾತೃಭಾಷೆಯನ್ನು ಬಳಸುವ ಸಾಮರ್ಥ್ಯವನ್ನಾದರೂ ನಮ್ಮ ವಿದ್ಯಾರ್ಥಿಗಳು ಕಲಿತಿಲ್ಲ. ಇದು ನಮ್ಮನ್ನು ಕಾಡುವ ಪ್ರಶ್ನೆಯಾಗಿದೆ.

ಈ ಪರಿಸ್ಥಿತಿಗೆ ಕಾರಣವೇನೆಂದು ಪ್ರಶ್ನೆಮಾಡಿದರೆ, ವಿಶ್ವವಿದ್ಯಾನಿಲಯಗಳು ಕಾಲೇಜುಗಳಕಡೆಗೆ, ಕಾಲೇಜುಗಳು ಪ್ರೌಢಶಾಲೆಗಳಕಡೆಗೆ, ಪ್ರೌಢಶಾಲೆಗಳು ಪ್ರಾಥಮಿಕ ಶಾಲೆಗಳಕಡೆಗೆ ಬೆರಳು ಮಾಡುವುದನ್ನು ನಾವು ನೋಡಬಹುದು. ಅಂದರೆ ವಿಶ್ವವಿದ್ಯಾನಿಲಯದ ಪ್ರಾಧ್ಯಾಪಕರು, ಉಪನ್ಯಾಸಕರು ಸರಿಯಾಗಿ ಪ್ರೌಢಶಾಲೆಗಳಲ್ಲಿ ಕನ್ನಡ ಕಲಿಸಿಲ್ಲ ಎಂದು ಆರೋಪಿಸುವುದು, ಅವರು ಪ್ರಾಥಮಿಕ ಶಾಲೆಗಳ ಶಿಕ್ಷಕರು ಸರಿಯಾದ ರೀತಿಯಲ್ಲಿ ಪಾಠ ಮಾಡುವುದಿಲ್ಲ ಎಂದು ಅವರನ್ನು ದೂಷಿಸುವುದು ಸರ್ವೇಸಾಮಾನ್ಯವಾಗಿಬಿಟ್ಟಿದೆ. ಸಮಸ್ಯೆಗಳ ವಿಚಾರ ಬಂದಾಗ ಒಬ್ಬರು ಇನ್ನೊಬ್ಬರತ್ತ ಕೈತೋರಿಸುವುದು ಹೊಸದೇನಲ್ಲ. ಆದರೆ ಇದು ಅಷ್ಟಕ್ಕೇ ಬಿಟ್ಟುಬಿಡಬಹುದಾದ ವಿಚಾರವು ಸಹ ಅಲ್ಲ. ಏಕೆಂದರೆ ಇದು ಶಿಕ್ಷಣಕ್ಕೆ ಹಾಗೂ ಸಮಾಜದ ಒಟ್ಟಾರೆ ಮುದಿನ ಭವಿಷ್ಯಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಪ್ರಶ್ನೆಯಾಗಿದೆ.

ಕನ್ನಡದ ಕಲಿಕೆ ಬಗ್ಗೆ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕನ್ನಡವನ್ನು ಸಮರ್ಥವಾಗಿ ಕಲಿಸುವ ಜವಾಬ್ದಾರಿ ಶಿಕ್ಷಣದ ಎಲ್ಲ ಹಂತದಲ್ಲೂ ಇದೆ ಎಂಬುದನ್ನು ಅರಿತುಕೊಳ್ಳುವುದು ಮುಖ್ಯ. ಭಾಷೆಯನ್ನು ಕಲಿಸುವುದು ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಶಿಕ್ಷಕರ ಜವಾಬ್ದಾರಿಯೆಂದು ಹೇಳಿ ಉಳಿದವರು ಕೈತೊಳೆದುಕೊಳ್ಳುವುದು ಸಹ ಸರಿಯಲ್ಲ. ಆದರೆ ಬುನಾದಿ ಸರಿ ಇರಬೇಕು ಎಂದು ಅಪೇಕ್ಷೆಪಡುವುದರಲ್ಲಿ ತಪ್ಪೇನಿಲ್ಲ. ಆರಂಭದಲ್ಲೇ ಸರಿಯಾದುದನ್ನು ಹೇಳಿಕೊಡದೇ ಹೋದರೆ ಅದು ತಪ್ಪಾಗಿ ಹಾಗೆಯೇ ಮುಂದುವರಿಯುತ್ತದೆ. ಕಾಲೇಜು ಹಂತದಲ್ಲಿ ಬರೆವಣಿಗೆಯಲ್ಲಿ ಕಾಗುಣಿತದ ತಪ್ಪು, ವಾಕ್ಯರಚನೆಯಂತಹ ದೋಷಗಳನ್ನು ಮಾಡುವ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಬಹುತೇಕರಿಗೆ ತಾವು ಬರೆಯುತ್ತಿರುವುದು ತಪ್ಪು ಎಂಬುದನ್ನು ತಿಳಿಸುವದೆ ದೊಡ್ಡ ಸವಾಲೆನಿಸಿದೆ. 'ನಮಗೆ ಕಲಿಸಿದ್ದೇ ಹೀಗೆ' ಎಂದು ಅನೇಕ ವಿದ್ಯಾರ್ಥಿಗಳು ಹೇಳುವುದನ್ನು ನಾವು ಕೇಳುತ್ತಿದ್ದೇವೆ. ಈ ಆರಂಭದ ಕಲಿಕೆಯ ದೋಷ ಎಷ್ಟು ತೀವ್ರವೆಂದರೆ ಇಂತಹ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಸರಿಯಾದ ಒಂದು ಪತ್ಯವನ್ನು ನಕಲು ಮಾಡಲೂ ಸಹ ಬರುವುದಿಲ್ಲ.

ಕಣ್ಣೆದುರೇ ಇರುವ ಪತ್ರವೊಂದನ್ನು ನೋಡಿ ಟಿಪ್ಪಣಿ ಮಾಡಲು ಹೇಳಿದರೆ ಅದರಲ್ಲಿ ಹಲವು ತಪ್ಪುಗಳು ಕಾಣುತ್ತವೆ. ಇದು ಪ್ರಾಥಮಿಕ ಶಾಲೆಯಲ್ಲೇ ಆರಂಭವಾದ ಸಮಸ್ಯೆ ಎಂದು ಹೇಳುವುದರಲ್ಲಿ ಸಂಶಯವೇ ಇಲ್ಲ. ಈ ಹಂತದ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಭಾಷಾಕಲಿಕಾಸಕ್ತಿ ಮೂಡಿಸುವುದು ಹಾಗೂ ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಲ್ಲೇ ಉತ್ತಮ ಕನ್ನಡವನ್ನು ಕಲಿಸುವಂತಹ ಸಮರ್ಥ ಶಿಕ್ಷಕರ ಕೊರತೆ ನಮ್ಮಲ್ಲಿ ಎದ್ದು ಕಾಣುತ್ತಿದೆ. ಇದು ಕಡೆಗಣಿಸಲಾಗದಂತಹ ಒಂದು ಗಂಭೀರ ವಿಷಯವೇ ಹೌದು.

ಇನ್ನೊಂದು ಸೂಕ್ಷ್ಮವಾದ ವಿಚಾರವೆಂದರೆ, ಪ್ರಾಥಮಿಕ ಶಾಲೆಯನ್ನೂ ಒಳಗೊಂಡಂತೆ ಶಿಕ್ಷಣದ ವಿವಿಧ ಹಂತಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಹಾಜರಾತಿಯ ಸಮಸ್ಯೆ ಎದ್ದು ಕಾಣುತ್ತಿದೆ. ಎಷ್ಟೋ ಮಕ್ಕಳು ದಿನನಿತ್ಯ ತರಗತಿಗಳಿಗೆ ಹಾಜರಾಗುವದೆ ಇಲ್ಲ. ಶಾಲೆಗೆ ದಾಖಿಲಾಗುವುದು, ನೇರವಾಗಿ ಪರೀಕ್ಷೆ ಬರೆಯುವುದು, ಮುಂದಿನ ತರಗತಿಗೆ ಪ್ರವೇಶ ಪಡೆಯುವುದು – ಇಂತಹ ವ್ಯವಸ್ಥೆಗೆ ಪ್ರಾಮುಖ್ಯತೆ ಕೊಡುವಂತಹ ಸಾವಿರಾರು ಮಕ್ಕಳು ನಮ್ಮ ಮುಂದೆ ಇದ್ದಾರೆ. ಇದಕ್ಕೆ ಕಾರಣ ಬಡತನ, ಹೆತ್ತವರೊಂದಿಗೆ ದುಡಿಮೆಯಲ್ಲಿ ಕೈಜೋಡಿಸುವ ಅನಿವಾರ್ಯತೆ ಇದೆ,ಇಲ್ಲಿ ಮಾನವೀಯತೆಯ ಮುಖವೂ ಕಾಣುತ್ತದೆ. ಆದರೆ ವಿದ್ಯಾರ್ಥಿಗಳು ಪ್ರಾಥಮಿಕ ಶಾಲಾ ಹಂತದಲ್ಲೇ ನಿಯಮಿತವಾಗಿ ತರಗತಿಗೆ ಹಾಜರಾಗದೆ ಇದ್ದಾಗ ಅವರಿಗೆ ಉತ್ತಮ ಭಾಷಾ ಭೋಧನಾ ಕೌಶಲಗಳ ಪಾಠ ದೊರೆಯುವುದು ಕಷ್ಟಸಾಧ್ಯ. ಇದು ಮುಂದಿನ ಹಂತಗಳಲ್ಲಾದರೂ ಸರಿ ಹೋಗದೆ ಇದ್ದಾಗ ಅವರು ಸಮಾಜದ ಮುಖ್ಯವಾಹಿನಿಯೊಂದಿಗೆ ಸೇರುವುದೇ ಇಲ್ಲ.

ಭಾಷಾ ಬಳಕೆಯಲ್ಲಿ ಪ್ರಾದೇಶಿಕ ವಿಭಿನ್ನತೆಯ ವಿಷಯವನ್ನೂ ಇಲ್ಲಿ ಪ್ರಸ್ತಾಪಿಸಬಹುದು. ಕರ್ನಾಟಕದಲ್ಲಿ ಹಲವು ರೀತಿಯ ಕನ್ನಡಗಳಿವೆ. ಒಂದು ಪ್ರದೇಶದಿಂದ ಇನ್ನೊಂದು ಪ್ರದೇಶಕ್ಕೆ ಭಾಷಾ ಬಳಕೆಯ ವ್ಯತ್ಯಾಸವಾಗುತ್ತದೆ, ಆದರೆ ಪಠ್ಯಪುಸ್ತಕದಲ್ಲಿ ಒಂದೇ ಇರುತ್ತದೆ. ತಾವು ರೂಢಿಯಲ್ಲಿ ಆಡುವ ಮಾತಿಗೂ, ಪಠ್ಯಪುಸ್ತಕದ ಭಾಷೆಗೂ ವ್ಯತ್ಯಾಸವಿದೆ ಎಂಬುದನ್ನು ಅನೇಕ ವಿದ್ಯಾರ್ಥಿಗಳು ಗಮನಿಸುವುದೇ ಇಲ್ಲ. ಭಾಷಾ ವೈವಿಧ್ಯತೆಗಳನ್ನು ಗೌರವಿಸುವುದು, ಒಂದು ಪ್ರಮಾಣಿತ ಭಾಷೆಯನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವುದು ಎರಡೂ ಪ್ರಮುಖ ಸಂಗತಿಗಳೇ. ಇವೆರಡನ್ನೂ ಸಮತೋಲನದಿಂದ ಒಯ್ಯುವುದು ಒಂದು ದೊಡ್ಡ ಸವಾಲೇ. ಪ್ರಾದೇಶಿಕ ವೈವಿಧ್ಯತೆಗಳನ್ನು ಉಳಿಸಿಕೊಳ್ಳುವಷ್ಟೇ ನಮ್ಮ ವಿದ್ಯಾರ್ಥಿಗಳು ಓದಿ ಆಸ್ವಾದಿಸುವುದು ತುಂಬ ಮುಖ್ಯವಾಗಬೇಕಾಗಿದೆ.

ತಾಂತ್ರಿಕ ಶಿಕ್ಷಣ ವಿಭಾಗದ ಇಂಜಿನಿಯರಿಂಗ್ ಕೋರ್ಸ್‌ಗಳಲ್ಲಿ ಒಂದು ಭಾಷೆಯಾಗಿ ಕನ್ನಡವನ್ನು ಅಭ್ಯಾಸ ಮಾಡುವುದು ಕಡ್ಡಾಯವಾಗಿದ್ದರೂ, ಬಹುತೇಕ ಕಡೆ ಅದೊಂದು ಕಾಟಾಚಾರವಾಗಿ ಉಳಿದಿರುವುದು ಕಂಡುಬರುತ್ತದೆ. ಅಲ್ಲಿ ಕನ್ನಡ ಕಲಿಕೆಗೆ ಎಷ್ಟು ಪೂರಕವಾದ ವಾತಾವರಣವಿದೆ, ಪ್ರಾಧಾನ್ಯತೆ ಇದೆ, ಪರೀಕ್ಷೆಗಳನ್ನು ಎಷ್ಟು ವ್ಯವಸ್ಥಿತವಾಗಿ ಮಾಡುತ್ತಾರೆ ಎಂಬುದೆಲ್ಲವನ್ನು ಅಂತ ಸನ್ನಿವೇಶದಲ್ಲಿ ಕಲಿತ ವಿದ್ಯಾರ್ಥಿಗಳ ಮನಸ್ಥಿತಿಯು ತಿಳಿಸುತ್ತದೆ.

ಟಿ.ಪಿ.ಕೈಲಾಸಂ ರವರು ಕನ್ನಡಿಗರ ನಿರಾಭಿಮಾನ ಕುರಿತು ತಮ್ಮ ನಾಟಕದಲ್ಲಿ ಹೇಳಿರುವ ಮಾತು " ಕನ್ನಡಿಗರಲ್ಲಿ ಭಾಷಾ ಪ್ರೇಮ ಭಯಕೆಯಲ್ಲಿ ಎದ್ದುಕಾಣಬೇಕು – ಅದಕ್ಕೆ ಉದಾಹರಣೆ ಒಬ್ಬ ತಮಿಳಿಗ ತಮಿಳಿಗನ ಜೊತೆ ತಮಿಳಿನಲ್ಲಿ ಮಾತನಾಡುತ್ತಾನೆ. ಅದೇ ರೀತಿ ಒಬ್ಬ ಮರಾಠಿಗ ಮರಾಠಿಗನ ಜೊತೆ ಮರಾಠಿಯಲ್ಲಿ ಮಾತನಾಡುತ್ತಾನೆ. ಆದರೆ ಒಬ್ಬ ಕನ್ನಡಿಗ ಮತ್ತೊಬ್ಬ ಕನ್ನಡಿಗನ ಜೊತೆ ಇಂಗ್ಲೀಷನಲ್ಲಿ ಮಾತನಾಡಲು ಬಯಸುತ್ತಾನೆ, ಎಂದು ಅಂದೇ ಹೇಳಿದ್ದಾರೆ.ಇದರಿಂದ ಕನ್ನಡಿಗರ ಇಂಗ್ಲೀಷನ ವ್ಯಾಮೋಹ ಇರುವದು ಗೊತ್ತಾಗುತ್ತದೆ.

ಇನ್ನುಳಿದಂತೆ, ಬಹುತೇಕ ಖಾಸಗಿ ಕಾಲೇಜಿನಲ್ಲಿ ಅಂಕಗಳಿಕೆಯ ಒಟ್ಟಕ್ಷ್ಟೇ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಸಿದ್ಧಪಡಿಸುವ ಕಾಲೇಜುಗಳೆಂಬ ಕಾರ್ಖಾನೆಗಳಲ್ಲಿ ಭಾಷೆಯ ಬಗ್ಗೆ ತೀವ್ರ ಅನಾದರತೆ ಎದ್ದು ಕಾಣುತ್ತದೆ. ಅಲ್ಲಿ ಭೌತಶಾಸ್ತ್ರ, ರಸಾಯನಶಾಸ್ತ್ರ, ಗಣಿತದಂತಹ ವಿಜ್ಞಾನದ ವಿಷಯಗಳಿಗಷ್ಟೇ ಪ್ರಾಧಾನ್ಯತೆ; ಭಾಷೆಯ ಬಗ್ಗೆ ಆಲಸ್ಯ ದೋರಣೆ. ಅವರಿಗೆ ಭಾಷಾ ಶಿಕ್ಷಕರು 'ಬಿಟ್ಟ ಸ್ಥಳ ತುಂಬುವುದಕ್ಕಷ್ಟೇ' ಸೀಮಿತವಾಗಿದ್ದಾರೆ. ಆಡಳಿತ ಮಂಡಳಿಗಳ ಈ ಮನಸ್ಥಿತಿ ಸಹಜವಾಗಿಯೇ ವಿದ್ಯಾರ್ಥಿಗಳು ತಲೆಯಾಡಿಸುತ್ತಿದ್ದಾರೆ. ಅವರಿಗೆ 'ಕೋರ್ ಸಬ್ಜೆಕ್ಟ್'ಗಳು ಮಾತ್ರವೇ ಮುಖ್ಯ, ಭಾಷಾ ವಿಷಯಗಳಲ್ಲಿ ತೇರ್ಗಡೆಯಾದರೆ ಸಾಕು ಎಂಬ ಧೋರಣೆಯನ್ನು ಅವರೂ ಬೆಳೆಸಿಕೊಂಡರೆ ಭಾಷಾ ವಿಷಯಗಳ (ಐಚ್ಛಿಕ ಕನ್ನಡ ವಿಷಯ) ಅಧ್ಯಾಪಕರ ಗತಿ ದೇವರಿಗೇ ಪಾತ್ರವೇ ಪ್ರೀತಿ ಎನ್ನಬಹುದು.

ಭಾಷಾ ವಿಷಯ ಕುರಿತು ಅನೇಕ **ಮನೋವಿಜ್ಞಾನಿಗಳು** ಹೇಳುವಂತೆ " ಮಾತೃ ಭಾಷೆಯಲ್ಲಿ ಪರಿಣತಿ ಪಡೆದವರು ಅನ್ಯ ಭಾಷೆಯನ್ನು ಬೇಗ ಕಲಿಯುವರು. ಅದಕ್ಕೆ ಉದಾಹರಣೆ ಯೆಂಬಂತೆ ಪಿ. ಲಂಕೇಶ, ಚಂಪಾ,ಅಬ್ದುಲ್ ಕಲಾಂ,

ಸುಧಾಮೂರ್ತಿ ಇವರೆಲ್ಲ ಪ್ರಾಥಮಿಕ ಮತ್ತು ಪ್ರೌಢಶಾಲಾ ಶಿಕ್ಷಣವನ್ನು ಅವರ ಮಾತೃ ಭಾಷೆಯಲ್ಲಿಯೆ ಕಲಿತವರು. ಅದಕ್ಕೆ ಪೂರಕವೆಂಬಂತೆ ಭಾರತಿಯರಿಗೆ ಇಂಗ್ಲೀಷ ಅನ್ನು ಶೋಕಿಗೋಸ್ಕರ ಮಾತನಾಡುತ್ತಾರೆ ಎಂದು ಹೇಳಿದ್ದಾರೆ. **ವಿಜಯ ಕರ್ನಾಟಕ ಪತ್ರಿಕೆ**ಯವರು ಭಾರತದಲ್ಲಿ ಸರ್ವೇಮಾಡಿದ ವರದಿ ಪ್ರಕಾರ ಇಂಗ್ಲೀಷ ಅನ್ನು ಸ್ವಚ್ಛವಾಗಿ ಸ್ಪಷ್ಟವಾಗಿ ಮಾತನಾಡುವವರ ಸಂಖ್ಯೆ ಕೇವಲ **9%** ಮಾತ್ರ ಇನ್ನು ಕರ್ನಾಟಕದಲ್ಲಿ ಕೇವಲ **1%** ಜನ ಮಾತ್ರ ಇಂಗ್ಲೀಷ ಸರಿಯಾಗಿ ಮಾತನಾಡುವವರು ಸಿಗುತ್ತಾರೆ ಎಂದು ಸರ್ವೇ ಹೇಳುತ್ತದೆ.

ಕನ್ನಡ ಭಾಷಾ ಮಾಧ್ಯಮ:

ಕನ್ನಡ ಮಾಧ್ಯಮ ಶಿಕ್ಷಣದ ವಿಷಯವು ಮೇಲ್ನೋಟಕ್ಕೆ ಕಾಣುವಷ್ಟು ಸರಳ ಇಲ್ಲ. ಇದಕ್ಕೆ ಕಾನೂನು ಹಾಗೂ ಮನಸ್ಥಿತಿ ಎಂಬ ಎರಡು ಮುಖಗಳಿವೆ. ಕನ್ನಡ ಮಾಧ್ಯಮಕ್ಕೆ ಸಂಬಂಧಿಸಿದ ಕಾನೂನಿನ ಹೋರಾಟಕ್ಕೆ ದಶಕಗಳ ಇತಿಹಾಸವಿದೆ. 1980 ರಲ್ಲಿ ಗೋಕಾಕ ವರದಿಯ ಬಳಿಕ ಕನ್ನಡ ಮಾಧ್ಯಮದ ಶಿಕ್ಷಣಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸಾಕಷ್ಟು ಹೋರಾಟಗಳು ನಡೆದಿವೆ. ಇದರ ಫಲವೆಂಬಂತೆ, 4ನೇಯ ತರಗತಿಯವರೆಗೆ ಮಾತೃಭಾಷೆ ಅಥವಾ ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯಲ್ಲಿ ಶಿಕ್ಷಣ ನೀಡುವುದನ್ನು ಕಡ್ಡಾಯಗೊಳಿಸಿ 1994 ರಲ್ಲಿ ರಾಜ್ಯ ಸರ್ಕಾರ ಆದೇಶ ನೀಡಿತು. ಆದರೆ ಇದರ ವಿರುದ್ಧ ಖಾಸಗಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳು ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯದ ಕದತಟ್ಟಿದವು. ಈ ನಡುವೆ 2006 ರಲ್ಲಿ, ಎಲ್ಲಾ ಕನ್ನಡ ಮಾಧ್ಯಮ ಮತ್ತು ಭಾಷಾ ಅಲ್ಪಸಂಖ್ಯಾತರ ಶಾಲೆಗಳಲ್ಲಿ ಒಂದನೇ ತರಗತಿಯಿಂದಲೇ ಇಂಗ್ಲೀಷನ್ನು ಒಂದು ಭಾಷೆಯಾಗಿ ಕಲಿಸಬೇಕೆಂದು ರಾಜ್ಯ ಸರ್ಕಾರ ಇನ್ನೊಂದು ಆದೇಶ ಹೊರಡಿಸಿತು. 2014 ರಲ್ಲಿ ಸುಪ್ರೀಂ ಕೋರ್ಟ್ ತೀರ್ಪು ನೀಡಿ, 'ಭಾಷಾ ಮಾಧ್ಯಮದ ಆಯ್ಕೆ ಪೋಷಕರ ವಿವೇಚನೆಗೆ ಬಿಟ್ಟದ್ದು, ಸರ್ಕಾರ ಯಾವುದೇ ಕಾರಣಕ್ಕೂ ಬಲವಂತ ಮಾಡುವಂತಿಲ್ಲ' ಎನ್ನುವ ಮೂಲಕ ಪ್ರಾಥಮಿಕ ಶಾಲೆಯಲ್ಲಿ ಕನ್ನಡ ಮಾಧ್ಯಮವನ್ನು ಕಡ್ಡಾಯ ಮಾಡುವಂತಿಲ್ಲ ಎಂಬ ಒತ್ತಾಯಕ್ಕೆ ಬೆಂಬಲವಾಗಿ ನಿಂತು ಕನ್ನಡದ ಅಳಿವಿಗೆ ಪರೋಕ್ಷವಾಗಿ ಕಾರಣವಾಯಿತು. ಇದರಿಂದ ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನಾದರೂ ನೀಡಬೇಕೆಂಬ ಚಿಂತನೆಗೆ ಬಲವಾದ ಹಿನ್ನಡೆ ಉಂಟಾಯಿತು. ವಾಸ್ತವವಾಗಿ ಕನ್ನಡ ಮಾಧ್ಯಮದ ವಿಷಯ ಕೇವಲ ಕಾನೂನಿಗೆ ಸಂಬಂಧಿಸಿದ್ದಲ್ಲ. ಅದು ಮನಸ್ಥಿತಿಗೆ ಸಂಬಂಧಿಸಿದ್ದು. ಯಾವ ಮಾಧ್ಯಮವನ್ನೂ ಬಲವಂತವಾಗಿ ಹೇರುವಂತಿಲ್ಲ ಎಂಬುದನ್ನು ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯ ಹೇಳಿರುವಾಗ ತಮ್ಮ ಮಕ್ಕಳಿಗೆ ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಶಿಕ್ಷಣ ಕೊಡುವ ಅವಕಾಶವೂ ಹೆತ್ತವರಿಗಿದೆ ಎಂದಾಯಿತು. ಆ ಅವಕಾಶವನ್ನು ಉಪಯೋಗ ಮಾಡಿಕೊಳ್ಳುವ ಮನಸ್ಥಿತಿ ಎಷ್ಟು ಮಂದಿಗಿದೆ.

ಯುನೆಸ್ಕೋ ಕೂಡ ಎಲ್ಲ ಸ್ತರದ ಸಂಸ್ಥೆಗಳು, ಶಿಕ್ಷಣ ತಜ್ಞರು ಮಾತೃಭಾಷೆಯ ಶಿಕ್ಷಣವನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತಲೇ ಬಂದಿದ್ದಾರೆ. "ಮಾನಸಿಕ ಬೆಳವಣಿಗೆ ಹಾಗೂ ಚಿಂತನೆಗಳನ್ನು ಬಲಪಡಿಸುವುದಕ್ಕೆ ತಾಯ್ನುಡಿ ಸಹಕಾರಿ. ಇದು ಪರಿಕಲ್ಪನಾತ್ಮಕ ಯೋಚನೆಯನ್ನು ಬೆಳೆಸುತ್ತದೆ" ಎಂದು ಯುನೆಸ್ಕೋ ಹೇಳಿದೆ. ಪೋಷಕರಿಗೆ ಇರುವ ಮೂರು ಬಗೆಯ ತಪ್ಪು ಕಲ್ಪನೆಗಳ ಬಗ್ಗೆ ಅದು ಹೇಳುತ್ತದೆ:

➢ ಮಕ್ಕಳಿಗೆ ಇಂಗ್ಲೀಷ್ ಕಲಿಸುವ ಅತ್ಯುತ್ತಮ ರೀತಿ ಎಂದರೆ ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದಲ್ಲೇ ಕಲಿಸುವುದು.

➢ ಇಂಗ್ಲೀಷ್ ಕಲಿಕೆಯನ್ನು ಎಷ್ಟು ಬೇಗ ಸಾಧ್ಯವೋ ಅಷ್ಟು ಬೇಗ ಆರಂಭಿಸಬೇಕು.

➢ ಇಂಗ್ಲೀಷ್ ಕಲಿಕೆಗೆ ಮಾತೃಭಾಷೆ ಅಡ್ಡಿಯಾಗುತ್ತದೆ.

ಇಂತಹ ತಪ್ಪುಕಲ್ಪನೆಯೇ ನಮ್ಮ ಜನರನ್ನು ಇಂಗ್ಲಿಷ್ ಮಾಧ್ಯಮದ ಕುರಿತು ಅತಿಯಾದ ವ್ಯಾಮೋಹದತ್ತ ಹೋಗುವಂತೆ ಮಾಡಿದೆ. ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಕಲಿತರೆ ಮುಂದೆ ಭವಿಷ್ಯವಿಲ್ಲ, ಉತ್ತಮ ಉದ್ಯೋಗಾವಕಾಶಗಳು ದೊರೆಯುವುದಿಲ್ಲ ಎಂಬ ಆಲೋಚನೆ ಸಮಾಜದ ಬಹುಪಾಲು ಜನರಲ್ಲಿ ಭದ್ರವಾಗಿ ಬೇರೂರಿದೆ. ಆದರೆ ಇದಕ್ಕೆ ಯಾವುದೇ ಆಧಾರ ಇಲ್ಲ ಎಂಬುದನ್ನು ಇನ್ಫೋಸಿಸ್ ಅನ್ನು ಸ್ಥಾಪಿಸಿದಂತಹ ನಾರಾಯಣ ಮೂರ್ತಿ, ಭಾರತರತ್ನ ಸಿ. ಎನ್. ಆರ್. ರಾವ್ ನಂತಹ ಮೊದಲಾದ ಗಣ್ಯಾತಿಗಣ್ಯರು ಸಾಬೀತುಮಾಡಿದ್ದಾರೆ. ಆದರೆ ಜನರು ಇದನ್ನು ಒಪ್ಪಿಕೊಳ್ಳುವ ಮನಸ್ಥಿತಿಯಲ್ಲಿ ಇಲ್ಲ. ಇಂಗ್ಲೀಷ್ ಶಿಕ್ಷಣದ ಬೀಜವನ್ನು ಭಾರತಕ್ಕೆ ತಂದ ಮೆಕಾಲೆಯ ಚಿಂತನೆಯಲ್ಲೇ ಜನರು ಇದ್ದಾರೆ. ಇದನ್ನು ಅಳಿಸಿಹಾಕುವುದು ಅಥವಾ ಪರಿವರ್ತನೆಗೆ ತರುವುದು ಅಷ್ಟು ಸುಲಭ ಸಾಧ್ಯವಾದ ಕೆಲಸವಲ್ಲ.

ಮಹಾತ್ಮ ಗಾಂಧೀಜಿ ಬಹಳ ಹಿಂದೆಯೇ "ಇಂಗ್ಲೀಷ್ ಮಾಧ್ಯಮದ ಶಿಕ್ಷಣವು ಗ್ರಹಿಕೆಯ ಅಭಿವೃದ್ಧಿಯನ್ನು, ವಿಚಾರದ ಖಚಿತತೆಯನ್ನು, ಅಭಿಪ್ರಾಯಗಳ ಸ್ಪಷ್ಟತೆಯನ್ನು ಕುಂಠಿತಗೊಳಿಸುತ್ತದೆ. ವಿಚಾರಗಳ ಶ್ರೀಮಂತ ಪರಂಪರೆಯನ್ನು ಅರ್ಥ ಮಾಡಿಕೊಳ್ಳುವುದಕ್ಕೆ ಮಾತ್ರವಲ್ಲ, ತಮ್ಮನ್ನು ಪರಿಣಾಮಕಾರಿಯಾಗಿ, ಸ್ಪಷ್ಟವಾಗಿ ಮತ್ತು ಸರಳವಾಗಿ ಅಭಿವ್ಯಕ್ತಿಗೊಳಿಸುವುದಕ್ಕೆ ಮಾತೃಭಾಷೆಯೇ ಸಹಕಾರಿ" ಎಂದು ಹೇಳಿದ್ದಾರೆ.

ಕನ್ನಡದ ಉಳಿವು:

ಮೊದಲಿಗೆ ಕನ್ನಡ ಅಳಿವು ಎಂದರೆ ಏನು ಎಂಬ ಪ್ರಶ್ನೆಯನ್ನು ಹಾಕಿಕೊಳ್ಳೋಣ. ತುಂಬಾ ಸರಳವಾಗಿ ಚರ್ಚಿಸುವುದಾದರೆ, ನಾಳೆಯಿಂದ ಕರ್ನಾಟಕದಲ್ಲಿ ಕನ್ನಡ ಭಾಷೆ ಮಾತನಾಡುವವರು ಇಲ್ಲವಾದರೂ ಕೂಡಾ ಕನ್ನಡ ಬದುಕಿರುತ್ತದೆ. ಏಕೆಂದರೆ ಈಗಾಗಲೇ ಹಸ್ತಪ್ರತಿಗಳು, ಅಚ್ಚಾದ ಪುಸ್ತಕಗಳು ಇತ್ಯಾದಿ ನೂರಾರು ತರಹದ ವಿಭಿನ್ನ ತಂತ್ರಗಳಿಂದ ಕನ್ನಡವನ್ನು ಸಂರಕ್ಷಿಸಿ ಇಡಲಾಗಿದೆ. ಹಾಗಾಗಿ ಕನ್ನಡಿಗರು ಇರದಿದ್ದರೂ ಕನ್ನಡ ಬದುಕಿರುತ್ತದೆ ಎಂದು ವಾದಿಸಲು ಅಡ್ಡಿಯಿಲ್ಲ. ಆದರೆ ನಮ್ಮ ಬುದ್ಧಿ ಜೀವಿಗಳ ವಾದ ಈ ರೀತಿಯ ಉಳಿವಿನದ್ದಲ್ಲ. ಅದು ಕನ್ನಡಿಗರೆಂಬ ಒಂದು ಸಮುದಾಯದ ಕುರಿತಾದ ಚರ್ಚೆ. ಆ ರೀತಿಯ ಭಾಷಿಕರ ಸಮುದಾಯ ಭಾರತದಲ್ಲಿ ಇದೆಯೆ ಎಂಬುದನ್ನು ನಾವು ಮೊದಲು ಗುರುತಿಸಿಕೊಳ್ಳಬೇಕಾಗುತ್ತದೆ. ಅಂದರೆ ಭಾಷೆಯಿಂದ ಸಮುದಾಯದ ನಿರ್ಮಾಣವಾಯಿತೋ ಅಥವಾ ಸಮುದಾಯದ ಭಾಗವಾಗಿ ಭಾಷೆ ಇದೆಯೊ ಎಂಬ ಪ್ರಶ್ನೆಯನ್ನೂ ನಾವೂ ಕೇಳಿಕೊಳ್ಳಬೇಕಾಗುತ್ತದೆ. ಈ ಪ್ರಶ್ನೆಗಳನ್ನು ಬದಿಗಿಟ್ಟು ಆ ರೀತಿಯ ಭಾಷಿಕ ಸಮುದಾಯವೊಂದು ಇದೆ ಎಂದು ಭಾವಿಸಿ ಮುಂದುವರೆಯೋಣ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿ, ಒಂದು ಭಾಷಿಕರ ಸಮುದಾಯ ಹೇಗೆ ರೂಪುಗೊಳ್ಳುತ್ತದೆ ಎಂಬುದನ್ನು ತಿಳಿದರೆ ಮಾತ್ರ ಕನ್ನಡಿಗರ ಸಮುದಾಯ ಉಳಿಯುತ್ತದೆಯೋ ಇಲ್ಲವೋ ಎಂಬುದನ್ನು ನಾವು ಅರ್ಥೈಸಿಕೊಳ್ಳಲು ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಸಾಮಾನ್ಯವಾಗಿ ಯಾವುದೇ ಸಮುದಾಯದ ಕುರಿತು ಚರ್ಚಿಸುವಾಗ ಆ ಸಮುದಾಯಕ್ಕೆ ಒಂದು ಪರಂಪರೆಯಿರುತ್ತದೆ, ಅದರಲ್ಲಿ ಅನೇಕ ಆಚರಣೆ, ಶ್ರದ್ಧೆಗಳು ಇರುತ್ತವೆ. ಇದೇ ರೀತಿ ಕನ್ನಡಿಗರಿಗೆ ಹಲ್ಮಿಡಿಯಿಂದ ಪ್ರಾರಂಭವಾಗಿ, ಕವಿರಾಜಮಾರ್ಗಕಾರನಿಂದ ಹಿಡಿದು ಇಲ್ಲಿಯವರೆಗಿನ ಭಾಷಾ ಸಂಪತ್ತಿನ ಪರಂಪರೆಯಿದೆ. ಇದರಲ್ಲಿ ಜಾನಪದ, ಶಾಸ್ತ್ರೀಯ ಎಲ್ಲವೂ ಅಡಕವಾಗಿರುತ್ತದೆ. ಇಷ್ಟು ದೊಡ್ಡ ಇತಿಹಾಸವಿರುವ ಸಮುದಾಯ, ಕೇವಲ ಭಾಷಾ ಮಾಧ್ಯಮ ಕನ್ನಡವಾಗಿದ್ದರಿಂದ ಬದುಕಿತ್ತೋ ಅಥವಾ ಅದರ ಅಂತಃಸತ್ವ ಬೇರೆಲ್ಲದರೂ ಇದೆಯೋ ಎಂಬ ಪ್ರಶ್ನೆಯೊಂದಿಗೆ ಚರ್ಚೆಯನ್ನು ಒರೆಗೆ ಹಚ್ಚಬೇಕಾಗಿದೆ.

ಈ ರೀತಿ ಮಾಡಿದಾಗ ಕೇವಲ ಅಕ್ಷರ ಮಾಧ್ಯಮದಿಂದ, ಕನ್ನಡ ಶಾಲೆಯಿಂದ ಕನ್ನಡ ಸಮುದಾಯ ಪರಂಪರೆ ಬದುಕಲಿಲ್ಲ. ಕನ್ನಡದಲ್ಲಿ ಸಂವಹನ ಮಾಡಲು ವಚನ, ಮಠ ಮಾನ್ಯಗಳು, ಗಮಕ, ಕಂಸಾಳೆ, ತಾಳ ಮದ್ದಳೆ, ಬಯಲಾಟ, ಕೋಲಾಟ ಇತ್ಯಾದಿಗಳು ಇದ್ದವು. ಆ ಕಾರಣದಿಂದಲೇ ಇಂದಿನ ಉದಾರವಾದಿ ಚಿಂತಕರು ಗುರುತಿಸುವ ಅನಕ್ಷರಸ್ಥ, (ದಲಿತ/ಹಿಂದುಳಿದ) ಸಾಮಾನ್ಯನೊಬ್ಬ ಸಾಂಗತ್ಯ, ಕಂದಪದ್ಯಗಳೆರಡನ್ನೂ ಬಳಸಬಲ್ಲವನಾಗಿದ್ದ. ಇಂಥವರಿಗೆ ಅನೇಕ ಭಾಷೆಗಳೊಡನೆ ವ್ಯವಹರಿಸುವುದೂ ತಿಳಿದಿತ್ತು. ತಮ್ಮ ಜೀವನದ ಶ್ರದ್ಧೆಯ ಆಚರಣೆಗಳ ಸಾಂಸ್ಕೃತಿಕ ವ್ಯವಸ್ಥೆಗಳ ಮೂಲಕ ಇವರು ಕನ್ನಡವನ್ನು ಮುಂದಿನ ತಲೆಮಾರುಗಳಿಗೆ ದಾಟಿಸಿದರು. ಒಂದೆಡೆ ಕನ್ನಡ ಭಾಷಾ ಸಮುದಾಯ ನಿರಂತರವಾಗಿ ತಮಿಳು, ತೆಲುಗು, ಮಲಯಾಳಂ, ಸಂಸ್ಕೃತ, ಮರಾಠಿಗರ ಜೊತೆ ಸಹಬಾಳ್ವೆ ಮಾಡಿದರೆ ಮತ್ತೊಂದೆಡೆ ಹವ್ಯಕ, ಸಂಕೇತಿ, ತುಳು, ಕೊಂಕಣಿ, ಬ್ಯಾರಿ ಇತ್ಯಾದಿಗಳು ಕನ್ನಡ ಸಮುದಾಯದ ಭಾಗವೇ ಆಗಿಹೋದವು. ಹೀಗೆ ಅಕ್ಷರ/ಭಾಷಾ ಮಾಧ್ಯಮಗಳ ಹೊರತಾಗಿಯೂ ಕನ್ನಡ ಎಂಬುದು ಜನ ಜೀವನದ ಭಾಗವಾಗಿ ಪರಂಪರೆಯಲ್ಲಿ ಹರಿದು ಬಂದಿತು.

ಈ ವಾದವನ್ನು ಒಪ್ಪುವುದಾದಲ್ಲಿ ಕನ್ನಡ ಎಂಬುದು ಶಿಕ್ಷಣದಲ್ಲಿ ಭಾಷಾ ಮಾಧ್ಯಮವಾಗುವುದು ಅಥವಾ ಆಗದಿರುವುದು ಅದರ ಅಳಿವು–ಉಳಿವುಗಳನ್ನು ನಿರ್ಧರಿಸುವುದಿಲ್ಲ. ಇದನ್ನು ಇನ್ನೂ ಹೆಚ್ಚು ಸ್ಪಷ್ಟಪಡಿಸಿಕೊಳ್ಳಲು ನಾವು ಜಗತ್ತಿನ ಬೇರೆ ಭಾಷೆಗಳ ಉದಾಹರಣೆಯನ್ನೂ ಗಮನಿಸಬಹುದು. ಉದಾಹರಣೆಗಾಗಿ ಹಿಬ್ರೂ ಭಾಷೆಯನ್ನು ಗಮನಿಸಿದಾಗ, ನಮಗೆಲ್ಲರಿಗೂ ತಿಳಿದಿರುವಂತೆ, ಯಹೂದಿಗಳು ಸಾವಿರಾರು ವರ್ಷಗಳ ಕಾಲ ಅಲೆಮಾರಿಗಳಾಗಿದ್ದರೂ ಯಾವುದೇ ಹಿಬ್ರೂ ಮಾಧ್ಯಮದ ಶಾಲೆಗಳಿಲ್ಲದೆಯೂ ಹಿಬ್ರೂ ಭಾಷಾ ಸಮುದಾಯ ಜೀವಂತವಾಗಿತ್ತು, ಈಗ ಮತ್ತೆ ಅದು ಪುಟಿದೆದ್ದಿದೆ.

ಅನ್ನದ ಭಾಷೆಯಾಗಲಿ ನಮ್ಮ ಹೆಮ್ಮೆಯ ಕನ್ನಡ :

ಕನ್ನಡ ಮಾಧ್ಯಮದಲ್ಲಿ ಕಲಿತವರೂ ಒಳ್ಳೆಯ ಉದ್ಯೋಗ ಪಡೆದು, ಸಾಧನೆ ಮಾಡಿ ಸಮಾಜದಲ್ಲಿ ಉನ್ನತ ಸ್ಥಾನಮಾನ ಪಡೆಯಬಹುದು ಎಂಬುದು ಸಿದ್ಧವಾಗುವವರೆಗೆ ಇಂಗ್ಲಿಷ್ ಮೇಲಿನ ವ್ಯಾಮೋಹದ ಗೀಳು ಕರಗದು, ಕನ್ನಡದ ಮೇಲಿನ ಅಭಿಮಾನ ಗಟ್ಟಿಯಾಗದು. ಕನ್ನಡ ಅನ್ನದ ಭಾಷೆಯಾಗುವುದು ಇಂದಿನ ಅನಿವಾರ್ಯತೆ. ಹಾಗೆಂದು ಇದು ಒಂದೆರಡು ದಿನಗಳಲ್ಲಿ ಆಗುವಂತಹ ಕೆಲಸ ಅಲ್ಲ. ಇದು ಪ್ರಾಥಮಿಕ ಶಾಲೆಯಿಂದಲೇ ಮಕ್ಕಳಲ್ಲಿ ಕನ್ನಡದ ಬಗ್ಗೆ ಪ್ರೀತಿ, ಅಭಿಮಾನ ಬೆಳೆಸುವ ಕೆಲಸ ಆಗಬೇಕು. ಅದನ್ನು ಭಾಷಾಅಧ್ಯಾಪಕರು, ಹೆತ್ತವರು ಮನಃಪೂರ್ವಕವಾಗಿ ಮಾಡಬೇಕು. ಮನೆಯಲ್ಲೂ, ಸಂಬಂಧಿಕರ ನಡುವೆಯೂ ಮಕ್ಕಳೊಂದಿಗೆ ಇಂಗ್ಲಿಷ್‌ನಲ್ಲಿ ಮಾತನಾಡುವ, ಮಕ್ಕಳೂ ಹಾಗೆಯೇ ವರ್ತಿಸುವುದು ಪ್ರತಿಷ್ಠೆಯ ವಿಚಾರ ಎಂದು ತಿಳಿಯುವ ಪೋಷಕರಿರುವವರೆಗೆ ಈ ಬದಲಾವಣೆ ಆರಂಭವಾಗುವುದೇ ಕಷ್ಟ. ಕಲಿಕೆಯ ಪ್ರೀ ಹಂತದಲ್ಲೂ ಕನ್ನಡ ಭಾಷೆಯನ್ನು ಉತ್ತಮಪಡಿಸುವ, ಅದರ ಕುರಿತು ಪ್ರೀತಿಯನ್ನು ಬೆಳೆಸುವ ಜವಾಬ್ದಾರಿಯನ್ನು ಎಲ್ಲ ಹಂತದ ಅಧ್ಯಾಪಕರೂ ವಹಿಸಿಕೊಳ್ಳಬೇಕು. ಕನ್ನಡದ ಬಗ್ಗೆ ಕಾಳಜಿ ಮಾಡಬೇಕಾದವರು, ಮಕ್ಕಳಿಗೆ ಕನ್ನಡ ಕಲಿಸಬೇಕಾದವರು ಕನ್ನಡ ಅಧ್ಯಾಪಕರು ಮಾತ್ರ ಎಂಬ ಧೋರಣೆಯೂ ತೊಲಗಬೇಕು. ಶಾಲಾ ಕಾಲೇಜುಗಳಲ್ಲಿ ಭಾಷಾ ಶಿಕ್ಷಕರಿಗೆ ಉಳಿದ ಶಿಕ್ಷಕರಷ್ಟೇ ಪ್ರಾಧಾನ್ಯತೆ ದೊರೆತಾಗ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲೂ ಭಾಷೆ ಪ್ರಮುಖವಾದದ್ದು ಎಂಬ ಮನಸ್ಸು ದೃಢವಾಗುತ್ತದೆ.

ಕನ್ನಡವನ್ನು ಅನ್ನದ ಭಾಷೆಯಾಗಿಸುವಲ್ಲಿ **ಸರೋಜಿನಿ ಮಹಿಷಿ** ವರದಿಯ ಪರಿಣಾಮಕಾರಿ ಜಾರಿಗೆ ಪ್ರಮುಖ ಪಾತ್ರವಿದೆ. ಸರೋಜಿನಿ ಮಹಿಷಿ ವರದಿಯ **ಸ್ಥಳೀಯರಿಗೆ ಉದ್ಯೋಗಾವಕಾಶ** ಹೆಚ್ಚಿಸುವ ನಿಟ್ಟಿನಲ್ಲಿ ಕೆಲವು ಪ್ರಮುಖ ಸಲಹೆಗಳನ್ನು ನೀಡಿದೆ. ಉದಾಹರಣೆಗೆ, 'ಎ' ಗುಂಪಿನ ಉದ್ಯೋಗಗಳಲ್ಲಿ ಶೇ. 65ನ್ನೂ 'ಬಿ' ಗುಂಪಿನ ಹುದ್ದೆಗಳಲ್ಲಿ ಶೇ. 80ನ್ನೂ ಸ್ಥಳೀಯರಿಗೆ ಮೀಸಲಿಡಬೇಕು, 'ಸಿ' ಗುಂಪಿನ ಹುದ್ದೆಗಳಲ್ಲಿ ಶೇ. 100 ನ್ನು ಸ್ಥಳೀಯರಿಗೇ ನೀಡಬೇಕು ಎಂಬ ಶಿಫಾರಸು ಸಮರ್ಪಕವಾಗಿ ಜಾರಿಗೆ ಬಂದಲ್ಲಿ ಕನ್ನಡ ಮಾಧ್ಯಮದ ಅಭ್ಯರ್ಥಿಗಳ ಉದ್ಯೋಗಾವಕಾಶ ಹೆಚ್ಚಾಗಬಹುದು. ಆದರೆ ನಾವು ಕೇವಲ ಉದ್ಯೋಗಾವಕಾಶಗಳಿಗಾಗಿ ಹಕ್ಕುಮಂಡಿಸಿದರೆ ಸಾಲದು, ಆಧುನಿಕ ಕಾಲ ಬಯಸುವ ಜ್ಞಾನವನ್ನೂ ಕೌಶಲವನ್ನೂ ರೂಢಿಸಿಕೊಳ್ಳುವುದು ಅನಿವಾರ್ಯ. ಕನ್ನಡ ಮಾಧ್ಯಮವನ್ನು ಪ್ರತಿಪಾದಿಸುತ್ತ ಹೆಚ್ಚು ಉದ್ಯೋಗಾವಕಾಶಗಳನ್ನು ಅಪೇಕ್ಷಿಸುತ್ತ ಆಧುನಿಕ ಕಾಲ ಬಯಸುವ ಜ್ಞಾನ–ಕೌಶಲ್ಯಗಳನ್ನು ನಮ್ಮ ಮಕ್ಕಳು ರೂಢಿಸಿಕೊಳ್ಳದೇ ಹೋದರೆ ನಮ್ಮ ಪ್ರತಿಪಾದನೆಗಳಲ್ಲಿ ಯಾವ ತಿರುಳೂ ಉಳಿಯುವುದಿಲ್ಲ. ಕನ್ನಡ ಭಾಷೆಯ ಅಳಿವು–ಉಳಿವು ಕೇವಲ ಕಾನೂನಿನ ಕೆಲಸವೂ ಅಲ್ಲ, ಸರ್ಕಾರದ ಕೆಲಸವೂ ಅಲ್ಲ. ಅದು ಎಲ್ಲರೂ ಸೇರಿ ಮಾಡಬೇಕಾದ ಕೆಲಸ. ಧೋರಣೆಯಲ್ಲಿ ಆಗಬೇಕಾದ ಬದಲಾವಣೆಯ ವಿಚಾರ. ಎಲ್ಲವನ್ನೂ ಸರ್ಕಾರ ಮತ್ತು ಕಾನೂನು ಮಾಡುತ್ತೆಂದು ನಿರೀಕ್ಷಿಸುತ್ತ ಕೂರಲಾಗದು.

ಶಿಕ್ಷಣದ ಅಗತ್ಯದ ಬಗ್ಗೆ ಯಾರದೂ ಎರಡು ಮಾತಿಲ್ಲ. ಯಾವುದೇ ದೇಶಕಾಲದಲ್ಲೂ ಇದು ಒಂದಲ್ಲ ಒಂದು ರೂಪದಲ್ಲಿ ಅಸ್ತಿತ್ವದಲ್ಲಿದ್ದೇ ಮುಂದುವರೆದಿದೆ. ನಮಗೆ ಬೇಕೋ ಬೇಡವೋ ಹುಟ್ಟಿನಿಂದಲೇ ಇದು ಆರಂಭವಾಗಿರುತ್ತದೆ. ಆಗ ಮಾಧ್ಯಮದ ಪ್ರಶ್ನೆಯಿರುವುದಿಲ್ಲ. ಬಹುತೇಕ ಮಾತೃಭಾಷೆಯಲ್ಲಿಯೂ ಜತೆಗೆ ಪರಿಸರದ ಭಾಷೆಯಲ್ಲಿಯೂ ನಡೆಯುತ್ತಿರುತ್ತದೆ. ಸಂವಹನ ಹಾಗೂ ಸಂಪರ್ಕಗಳು ಸೀಮಿತವಾಗಿದ್ದಾಗ ಪ್ರಾಂತ ಭಾಷೆಗೇ ಮೊದಲ ಮಣೆ. ಈಗ ಚಿತ್ರಣ ಬದಲಾಗಿದೆ. ಇಂದಿನ 'ಜಾಗತಿಕ ಹಳ್ಳಿ'ಯ (Global village) ಚಿತ್ರಣವನ್ನು ಕಣ್ಮುಂದೆ ತಂದುಕೊಂಡರೆ ಭಾಷೆ ಎಲ್ಲಿ , ಎಷ್ಟು ಬೇಕಾದೀತು ಎಂಬ ಚಿಂತನೆಗೆ ತೊಡಗಲೇಬೇಕು. ನಗರ, ಜಿಲ್ಲೆ, ತಾಲೂಕು ಹಾಗೂ ಹಳ್ಳಿಗಳ ನಡುವೆಯೂ ಅಂತರ ಕಡಿಮೆಯಾಗುತ್ತಿದೆ. ಕಳೆದ ಎರಡು ಮೂರು ದಶಕಗಳಿಂದ ಇಚೆಗಂತೂ ನಮ್ಮ ಬದುಕಿನ ಶೈಲಿಗಳೇ ಹೊಸತಾಗಿದೆ. ವರ್ಣ, ವರ್ಗ ವ್ಯತ್ಯಾಸಗಳೇ ಮೊದಲಾದುವು ಸಂಕರಗೊಂಡಿವೆ. ಅರಿವಿಲ್ಲದಂತೆ ಭಾಷಾಸಂಕರವೂ ಇದರಲ್ಲಿ ಸೇರಿಹೋಗಿದೆ.

ಕನ್ನಡದ ಮಟ್ಟಿಗೆ ಗಮನಿಸಿದರೆ, ಬಹುತೇಕ ಶಿಕ್ಷಿತ ಕನ್ನಡಿಗರು ಮಾತನಾಡುವುದು ಅರೆಗನ್ನಡದಲ್ಲಿಯೇ ! ಬಳಸುವ ಒಂದು ವಾಕ್ಯದಲ್ಲಿ ಅರ್ಧಾಂಶಕ್ಕೂ ಮಿಕ್ಕಿ ಇಂಗ್ಲೀಷ್‌ನ ಪದಗಳೇ ಇರುತ್ತದೆ. ಮಾಧ್ಯಮದ ಮಾತುಕತೆ, ಕಾರ್ಯಕ್ರಮಗಳಲ್ಲೂ ಇದರ ಅವತಾರವಿದೆ. ತ್ರಿಭಾಷಾ ಸೂತ್ರವಿದ್ದರೂ ಅದು ಬಹುತೇಕ ದ್ವಿಭಾಷಾ ಮತ್ತು ಕೆಲವೆಡೆ ಇಂಗ್ಲೀಷ್ ಪ್ರಧಾನವಿರುವುದು ಕಾಣುತ್ತದೆ. ಪತ್ರ ಲೇಖನದಲ್ಲಿ , ವಿಳಾಸ ಬರೆಯುವಲ್ಲಿ ವೈದ್ಯಕೀಯ ರಂಗದಲ್ಲಿ, ವೈಜ್ಞಾನಿಕ ರಂಗದಲ್ಲಿ ಕನ್ನಡ ಹಿಂದುಳಿದಿದೆ.

ಹತ್ತಾರು ಭಾಷೆಗಳ ಕುಟುಂಬ ಒಟ್ಟಿಗೆ ವಾಸಿಸುವ ನಗರದ ಸಂಕೀರ್ಣಗಳಲ್ಲಿನ ಮಕ್ಕಳಿಗಂತೂ ಸಂಪರ್ಕ ಭಾಷೆಯೇ ಪರಿಸರದ ಅದೇ ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯಾಗಿಬಿಟ್ಟಿದೆ (ಹೆಚ್ಚಾಗಿ ಇಂಗ್ಲೀಷ್). ಈ ಸನ್ನಿವೇಶದಲ್ಲಿ ಮಾತೃಭಾಷೆಯ ಅಥವಾ ಪ್ರಾದೇಶಿಕ ಭಾಷೆಯ ಬಗ್ಗೆ ಅಕ್ಕರೆ ಬೆಳೆಯುವುದೆಂತು?

ಅದಕೋಸ್ಕರ 1854ರ ವುಡ್ಡನ ವರದಿಯು (Wood's despatch) ಇಂಗ್ಲಿಷ್ ಹಾಗೂ ದೇಶಿ ಭಾಷೆಗಳನ್ನು ಜೊತೆಯಾಗಿ ಬಳಸಬೇಕೆಂದು ಸಲಹೆ ನೀಡಿತು. 1882 ರ ಹಂಟರ್ ಆಯೋಗ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನು ಮಾತೃಭಾಷೆಯ ಮೂಲಕ ನೀಡಬೇಕೆಂದು ಉಲ್ಲೇಖಿಸಿತು. 1944 ರ ಸಾರ್ಜೆಂಟ್ ವರದಿಯಲ್ಲಿ ಪ್ರೌಢಶಾಲೆಗಳಲ್ಲಿ ಮಾತೃಭಾಷೆಯ ಬೋಧನಾ ಮಾಧ್ಯಮವಾಗಿದ್ದು ಇಂಗ್ಲಿಷ್ ದ್ವಿತೀಯ ಭಾಷೆಯಾಗಬೇಕೆಂದು ಟಿಪ್ಪಣಿ ನೀಡಿತು. ಸ್ವಾತಂತ್ರ್ಯಾನಂತರದ ಭಾರತದಲ್ಲಿ 1948 ರ ರಾಧಾಕೃಷ್ಣನ್ ವಿಶ್ವವಿದ್ಯಾಲಯ ಆಯೋಗವು ಭಾಷಾ ನೀತಿಗೆ ಸಂಬಂಧಿಸಿ ತ್ರಿಭಾಷಾ ಸೂತ್ರವನ್ನು ಸಲಹೆ ಮಾಡಿತು. ಅವುಗಳೆಂದರೆ ಹಿಂದಿ, ಪ್ರಾದೇಶಿಕ ಭಾಷೆ ಹಾಗೂ ಅನ್ಯ ಭಾಷೆ(ಇಂಗ್ಲೀಷ್). ಮುಂದಿನ 1952–53 ರ ಡಾ॥ಮೊದಲಿಯಾರ್ ಆಯೋಗವು ಮಾಧ್ಯಮಿಕ ಶಿಕ್ಷಣದಲ್ಲಿ ಮಾಧ್ಯಮವು ಮಾತೃಭಾಷೆ ಅಥವಾ ರಾಜ್ಯಭಾಷೆಯಾಗಿರಬೇಕೆಂದು ಶಿಫಾರಸು ಮಾಡಿತು. ನಂತರದ ಕೊಠಾರಿ ಶಿಕ್ಷಣ ಆಯೋಗವೂ(1964–66) ಇದನ್ನೇ ಒತ್ತಿ ಹೇಳಿತು. ಇವುಗಳಲ್ಲಿ ಭಾಷಾನೀತಿಯ ಕುರಿತಾದ ಅಂಶವನ್ನು ಮಾತ್ರ ತಿಳಿಸಿದ್ದೇನೆ. ವಿಶೇಷವಾಗಿ ಶಿಕ್ಷಣ ಮಾಧ್ಯಮ ಕುರಿತಾಗಿ ವಿವೇಕಾನಂದರು, ಗಾಂಧೀಜಿ, ರಾಧಾಕೃಷ್ಣನ್, ರವೀಂದ್ರನಾಥ ಠಾಗೂರ್ ಮೊದಲಾದ ಭಾರತೀಯ ಚಿಂತಕರಲ್ಲದೆ ಪಾಶ್ಚಾತ್ಯ ಶಿಕ್ಷಣ ತಜ್ಞರೂ ಸಹ ಮಾತೃಭಾಷೆಯಲ್ಲಿಯೇ ಆರಂಭದ ಶಿಕ್ಷಣ ಇರಬೇಕೆಂದು ಪ್ರತಿಪಾದಿಸಿದ್ದಾರೆ. ಇತ್ತೀಚಿನ 2009 ರ ಶಿಕ್ಷಣದ ಹಕ್ಕು ನೀತಿ ಹಾಗೂ 2020 ಮತ್ತು 2022 ರ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಗಳೂ ಸಹ ಮಾತೃಭಾಷೆ / ಪ್ರಾದೇಶಿಕ ಭಾಷೆಗಳಿಗೇ ಮಣೆ ಹಾಕಿರುವುದು. ಶಿಕ್ಷಣವನ್ನು ಕುರಿತಾದ ಉಳಿದ ವಿಷಯಗಳು (ಪಠ್ಯಕ್ರಮ, ಶಿಕ್ಷಕರ ನೇಮಕ, ಸೌಲಭ್ಯಗಳು ಇತ್ಯಾದಿ) ಏನೇ ಇರಲಿ ಬೋಧನಾ ಮಾಧ್ಯಮವನ್ನು ಕುರಿತಾಗಿ ಮಾತ್ರ ವಸ್ತುನಿಷ್ಠವಾಗಿ ನೋಡೋಣ.

ಕಾಲಕ್ಕೆ ತಕ್ಕ ಹಾಗೆ ಶಿಕ್ಷಣ ಮಾಧ್ಯಮ ಬದಲಾದರು ಕನ್ನಡದ ಉಳಿಕೆ ಬೇಕು :

ಮಾಧ್ಯಮ ಯಾವುದಾದರೇನು? ಅದು ಮಕ್ಕಳಿಗೆ ಮುಂದಿನ ದಿನಗಳಲ್ಲಿ ಅನುಕೂಲವಾಗುವಂತೆ ಇರಬೇಕು. ಆಂಗ್ಲ ಭಾಷೆಯಲ್ಲಿ ಪ್ರಾವೀಣ್ಯತೆಗಳಿಸಿ, ಆದರೆ ಅದರ ಜೊತೆ ಕನ್ನಡವನ್ನು ಬೆಳೆಸಬೇಕು. ಶಿಕ್ಷಣ ಮಾಧ್ಯಮಕ್ಕೆ ಸಂಬಂಧಿಸಿದಂತೆ ಸರ್ವೋಚ್ಚ ನ್ಯಾಯಾಲಯದ ತೀರ್ಪು ಹೊರಬಿದ್ದಿದೆ. ಈ ತೀರ್ಪು ಅನಿರೀಕ್ಷಿತವೇನಲ್ಲ. ರಾಜ್ಯ ಸರ್ಕಾರಕ್ಕೆ ಹಗ್ಗ ಕೊಟ್ಟು ಕೈ ಕಟ್ಟಿಸಿಕೊಂಡ ಸ್ಥಿತಿ ಎದುರಾಗಿದೆ. ಆದರೆ ಕನ್ನಡಿಗರಾದ ನಾವೆಲ್ಲಾ ಕೈಜೋಡಿಸಿದರೆ ಅಸಾಧ್ಯವಾದದ್ದು ಯಾವುದು ಇಲ್ಲ.

ಉಪಸಂಹಾರ :–

ಭಾರತದಂತಹ ಪ್ರಜಾಪ್ರಭುತ್ವ ರಾಷ್ಟ್ರದಲ್ಲಿ ಕನ್ನಡದ ಅಳಿವು ಉಳಿವಿನ ಬಗ್ಗೆ ಚರ್ಚಿಸುವಂತಹ ಸನ್ನಿವೇಶಕ್ಕೆ ಬಂದಿದ್ದೇವೆ ಎಂದರೆ ವಿಪರ್ಯಾಸವೇ ಸರಿ ಏಕೆಂದರೆ ಸಾವಿರಾರು ವರ್ಷಗಳ ಇತಿಹಾಸ ಹೊಂದಿರುವ ಕನ್ನಡ ಭಾಷೆ ವಿಶ್ವದ ಲಿಪಿಗಳ ರಾಣಿ, ಎಂಟು ಜ್ಞಾನಪೀಠ ಪ್ರಶಸ್ತಿ, ಸುಮಾರು ಏಳು ಲಕ್ಷ ಜನಸಂಖ್ಯೆ ಹೊಂದಿರುವ ಕರ್ನಾಟಕದಲ್ಲಿ ಕನ್ನಡದ ಸ್ಥಿತಿ ಸೂಚನೆಯವಾಗಿದೆ. ಕನ್ನಡವನ್ನು ಇಂದಿನ ಯುವಕರಿಗೆ ತಪ್ಪಿಲ್ಲದೆ ಓದಲು ಬರೆಯಲು ಬಾರದಂತಹವರ ಜೊತೆಯಲ್ಲಿ ಇದ್ದೆವೆ. ಇದಕ್ಕೆ ಕಾರಣ ಯುವಜನತೆಗೆ ಇಂಗ್ಲಿಷ್ ಭಾಷಾ ವ್ಯಾಮೋಹದಿಂದ ಕನ್ನಡವನ್ನು ಉಳಿಸಿಕೊಳ್ಳುವಂತಹ ಸ್ಥಿತಿಗೆ ನಾವು ಬಂದಿದ್ದೇವೆ. ಇದು ಬರೀ ಭಾಷೆಯಲ್ಲ ಜೀವನದ ಜೀವ ಭಾಷೆ, ಅನ್ನದ ಭಾಷೆ, ಬದುಕಿನ ಭಾಷೆ, ಹೆಮ್ಮೆಯ ಭಾಷೆಯಾಗಿ ಎಲ್ಲರೂ ಜೀವನದಲ್ಲಿ ಮೈಗೂಡಿಸಿಕೊಳ್ಳಬೇಕು. ಆಗ ಮಾತ್ರ ಕನ್ನಡ ಅಸ್ಮಿತೆ ಮುಂದಿನ ಜನಾಂಗಕ್ಕೆ ಪಸರಿಸುತ್ತದೆ. ಹಾಗಾಗಿ ನಾವೆಲ್ಲ ಕನ್ನಡವನ್ನು ಉಳಿಸಿ ಬೆಳೆಸೋಣ ಬನ್ನಿ....

ಆಕರಗ್ರಂಥಗಳು :–

ಕೆ.ವಿ.ನಾರಾಯಣ (ಸಂಪಾದಕರು) (2007) ' ಭಾಷೆ ' ಕನ್ನಡ ವಿಶ್ವ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.

ಚಿದಾನಂದಮೂರ್ತಿ.ಎಂ (1989) ' ಭಾಷಾ ವಿಜ್ಞಾನದ ಮೂಲತತ್ತ್ವಗಳು' ಡಿ ವಿ ಕೆ ಮೂರ್ತಿ, ಮೈಸೂರು.

ಡಿ ಎನ್ ಶಂಕರ ಭಟ್ (1994) 'ಕನ್ನಡ ವ್ಯಾಕರಣ ಪರಂಪರೆ: ಕನ್ನಡ' ಕನ್ನಡ ವಿಶ್ವ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.

ರಾ.ಅನಂತರಾಮು.(1989) ಕನ್ನಡ ಭಾಷಾ ಬೋಧನೆ. ಚೇತನ್ ಬುಕ್ಕ ಹೌಸ್. ಮೈಸೂರು.

ಡಾ. ಓಬಳೇಶ ಘಟ್ಟಿ. (2007) ಭಾಷೆ ಮತ್ತು ಕನ್ನಡ ಭಾಷಾ ಬೋಧನೆ. ವಿದ್ಯಾನಿಧಿ, ಪ್ರಕಾಶನ, ಗದಗ.

ಅನುಸೂಯಾ ಪರಗಿ (2000) ಮಾತೃ ಭಾಷೆ ಕನ್ನಡ ತತ್ತ್ವ ಮತ್ತು ಬೋಧನಾ ಮಾರ್ಗ, ವಿವೇಕ ಪ್ರಕಾಶನ, ಚಿಕ್ಕಬಳ್ಳಾಪುರ.

ಡಿ.ಎಸ್.ಇ.ಆರ್.ಟಿ. (2001) ಚೈತನ್ಯ. ಡಿ.ಎಸ್.ಇ.ಆರ್.ಟಿ.ಬನಶಂಕರಿ ಮೂರನೆ ಹಂತ, ಬೆಂಗಳೂರು.

ಚಿದಾನಂದಮೂರ್ತಿ.ಎಂ (1976) ಕನ್ನಡ ಶಾಸನಗಳ ಸಾಂಸ್ಕೃತಿಕ ಅಧ್ಯಯನ, ಸಪ್ಪ ಬುಕ್ಕ ಹೌಸ್.ಬೆಂಗಳೂರು.

ಶಿಕ್ಷಣವ್ಯವಸ್ಥೆ: ಹಲವು ಚಿಂತನೆ

ಡಾ. ಮೋಹನ ಚಂದ್ರಗುತ್ತಿ,
ಸಹ ಪ್ರಧ್ಯಾಪಕರು, ಸಹ್ಯಾದ್ರಿ ಕಲಾ ಕಾಲೇಜು, ಶಿವಮೊಗ್ಗ.

ಸಮಾನತೆಯ ಕನಸಿನ ಭಾರತ

ಎಲ್ಲಾ ಪ್ರಜೆಗಳು ಸಮಾನ ಅವಕಾಶ, ಹಕ್ಕುಗಳಿಗೆ ಬಾಧ್ಯರು ಎಂಬ ಬಹುದೊಡ್ಡ ನಂಬಿಕೆಯೆ ನಮ್ಮ ಪ್ರಜಾಪ್ರಭುತ್ವದ ಉದ್ದೇಶ ಮತ್ತು ಕರ್ತವ್ಯ. ಇದನ್ನು ಈಡೇರಿಸಲು ಅಗತ್ಯದ ಕಾರ್ಯಗಳನ್ನು ಕೈಗೊಳ್ಳಲು ಸದಾ ಅದು ಸನ್ನದ್ಧವಾಗಿರುತ್ತದೆ. ವೈವಿದ್ಯಮಯ ಮತ್ತು ವರ್ಣಮಯ ಸಂಸ್ಕೃತಿ ಇರುವ ಈ ದೇಶದಲ್ಲಿ ಅವಕಾಶಗಳು ಮತ್ತು ಅನುಕೂಲಗಳು ಸಮಾನ ಪಾತಳಿಯಲ್ಲಿ ಹಂಚಿಕೆಯಾಗಿಲ್ಲ. ಇದನ್ನು ಹೀಗೂ ಹೇಳಬಹುದು ಎಂದರೆ ಹಾಗೆ ಹಂಚಿಕೆಯಾಗದಂತೆ ಧರ್ಮ ಮತ್ತು ದೇವರಗಳ ಹೆಸರಿನಲ್ಲಿ ನೋಡಿಕೊಳ್ಳಲಾಗಿದೆ. ಆದ್ದರಿಂದ ಪ್ರತಿ ಸಮುದಾಯ ಮತ್ತು ಪ್ರಾದೇಶಿಕತೆಯ ನಡುವೆ ಇರುವ ಭಿನ್ನತೆಗಳ ಜೊತೆಯಲ್ಲಿಯೇ ಸಮಾನ ನೆಲೆಗಳನ್ನು ಮತ್ತು ಅವಕಾಶಗಳನ್ನು ರೂಪಿಸುವ ಅಗತ್ಯ ಇವತ್ತಿಗೆ ಹೆಚ್ಚು ಮಹತ್ವ ಹೊಂದಿದೆ. ಸ್ವಾತಂತ್ರ್ಯ ಬಂದ ಇಷ್ಟು ವರ್ಷಗಳಲ್ಲಿ ಅಭಿವೃದ್ಧಿಯ ಬಹುಪಾಲನ್ನು ಕೆಲ ಸಮುದಾಯಗಳು ಮಾತ್ರ ಬಳಸಿಕೊಂಡಿವೆ. ಕೆಲವು ಸಮುದಾಯಗಳಿಗೆ, ಪ್ರದೇಶಗಳಿಗೆ ಈ ಅಭಿವೃದ್ಧಿಯ ಫಲಗಳು ಔಪಚಾರಿಕವಾಗಿಯೂ ಕೂಡಾ ತಲುಪಿಲ್ಲ. ನಮಗೊಂದು ಸ್ವಾತಂತ್ರ್ಯ ಬಂದಿದೆ ಎಂಬುದು ಕೂಡಾ ಅವರಿಗೆ ಗೊತ್ತಾಗಿಲ್ಲ. ದೊಡ್ಡ ಹಾಗೂ ಪ್ರಭಾವಶಾಲಿ ಸಮುದಾಯಗಳು ಅಭಿವೃದ್ಧಿಯ ಅನುಭೋಗವನ್ನು ಅತ್ಯಂತ ಜತನದಿಂದ ಉಪಯೋಗಿಸಿಕೊಂಡು ಮುನ್ನುಗ್ಗುತ್ತಿರುವಾಗ ಇಂತಹ ಯಾವ ಸೌಲಭ್ಯಗಳನ್ನು ಪಡೆಯದ ಸಮುದಾಯಗಳು ಸ್ವಾತಂತ್ರ್ಯ ಹಾಗೂ ಸಮಾನತೆಯ ನೆಲೆಗಳಿಂದ ದೂರ ಸರಿಯತೊಡಗುತ್ತವೆ. ಪರಮಾಧಿಕಾರವನ್ನು ಪಡೆಯಬೇಕಾದ ಪ್ರಜೆಯು ರಾಜಕೀಯ ನಾಯಕತ್ವವನ್ನು ಪಡೆಯದೆ ಇದ್ದಾಗ, ಪ್ರಜಾಪ್ರಭುತ್ವದಲ್ಲಿ ಬಾಗೀದಾರನಾಗಲು ಸಾಧ್ಯವಿಲ್ಲ. ಭಾರತದಂತಹ ದೇಶದಲ್ಲಿ ಆಗ ಪ್ರಜಾಪ್ರಭುತ್ವ ಯಶಸ್ಸಿಯಾಗುವುದಿಲ್ಲ.

ಸ್ವಾತಂತ್ರ್ಯವೆಂಬುದು ಶಬ್ದ ವರ್ಣನೆಯಲ್ಲ. ಅದು ಪ್ರಜಾಪ್ರಭುತ್ವ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಸಾಮಾನ್ಯ ಅನುಭವಿಸಬಹುದಾದ ಅನುಭವ. ಅರಾಜಕತೆಯನ್ನು ಸೃಷ್ಟಿ ಮಾಡಬಹುದಾದ ಅನಿಯಂತ್ರಿತ ಅಧಿಕಾರವಲ್ಲ. ಆಗಸದಲ್ಲಿ ಹಾರುವ ಗರುಡ ಮತ್ತು ಪಾರಿವಾಳಗಳು ನಿಶ್ಶಂಕೆಯಿಂದ ಹಾರಬಹುದಾದ ನಿಯಂತ್ರಿತ ಅಧಿಕಾರದ ಅನುಭವ. ಸ್ವಾತಂತ್ರ್ಯವು ಅಂಗಡಿಯಲ್ಲಿ ಸಿಗಬಹುದಾದ ಸಿದ್ಧ ಅಡುಗೆಯಲ್ಲ. ನಮಗೆ ನಾವೆ ರೂಪಿಸಿಕೊಳ್ಳಬಹುದಾದ ವಸ್ತು. ಪ್ರಭುತ್ವ ಪ್ರಜೆಗಳಿಗೆ ನೀಡಬಹುದಾದ ಗರಿಷ್ಠ ಸಾಧ್ಯತೆಯದು.

ಭಾರತದ ಪ್ರಜಾಪ್ರಭುತ್ವದ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ಶಾಂತಿ–ಅಹಿಂಸೆಗೆ ಹೆಚ್ಚು ಆದೃತೆ ಕೊಡಲಾಗಿದೆ. ಜೈನ ಧರ್ಮ ಮತ್ತು ಬೌದ್ಧ ಧರ್ಮಗಳ ಸಾರದ ರೂಪದಲ್ಲಿ ಗಾಂಧೀಜಿ ರೂಪಿಸಿದ ತಾತ್ವಿಕ ಸ್ವರೂಪವದು. ಪ್ರಭುತ್ವವು ದಾಹ, ಹಸಿವಿಗಾಗಿ ರಾಜ್ಯಗಳನ್ನು ಆಕ್ರಮಿಸುತ್ತ ಹೋದ ಕಥೆ ಚರಿತ್ರೆಯಲ್ಲಿ ನಾವು ಕಂಡಿದ್ದೇವೆ. ಇದರಿಂದ ಹೆಚ್ಚು ಶೋಷಣೆಗೆ ಒಳಗಾದವರು ಜನಸಾಮಾನ್ಯರು. ರಕ್ಷಸಿಕ್ತ ಚರಿತ್ರೆಯಲ್ಲಿ ಯಾರೂ ಅಜೇಯರಾಗಿ ಉಳಿಯದಿದ್ದರೂ ಮನುಕುಲದ ಮೇಲೆ ಅಗಾಧ ಗಾಯದ ಗುರುತುಗಳನ್ನು ಮಾಡಿದೆ. ಭಾರತದಂತಹ ದೇಶಕ್ಕೆ ಇದರ ಅನುಭವ ಚರಿತ್ರೆಯುದ್ದಕ್ಕೂ ಪದೆ ಪದೆ ಆಗಿದೆ. ಆದ್ದರಿಂದಲೇ ಭಾರತದ ಸಂವಿಧಾನದ ಆತ್ಮದಲ್ಲಿ ಅಹಿಂಸೆ ಮತ್ತು ಶಾಂತಿಯನ್ನು ಅಂಬೇಡ್ಕರ್ ಅವರು ಪ್ರಜ್ಞಾಪೂರ್ವಕವಾಗಿಯೇ ನೆಲೆಗೊಳಿಸುವ ಪ್ರಯತ್ನ ಮಾಡಿದರು. ಪರಮತ ಸಹಿಷ್ಣುತೆ ಮತ್ತು ಗೌರವದ ನಿರ್ಧಾರಗಳು ಸಮಾಜದ ಪ್ರತಿ ವ್ಯಕ್ತಿಯ ಮಾನಸಿಕ ಸ್ಥಿತಿಯಾಗಿದೆ. ಇಂತಹ ಮಾನಸಿಕ ಸ್ಥಿತಿಯನ್ನು ರೂಪಿಸುವ ಕಾರ್ಯ ಈಗ ತುಂಬಾ ಅವಶ್ಯಕತೆ ಇದೆ. ಯಾಕೆಂದರೆ ಪ್ರತಿ ಮನಸ್ಸನ್ನು ಅಧಿಕಾರದ ಲಾಲಸೆಯ ಬಗ್ಗಡಗೊಳಿಸುತ್ತಿರುವ ಧೃತಿಗೆಟ್ಟ ಕಾಲವಿದು.

ಆಧುನಿಕ ಸಂದರ್ಭದಲ್ಲಿ ಇಂತಹ ವೈರುದ್ಧದ ಕಾಲವನ್ನು ತಿಳಿಗೊಳಿಸುವ ಶಕ್ತಿ ಶಿಕ್ಷಣಕ್ಕೆ ಮಾತ್ರ ಇದೆ. ಅದನ್ನು ನೆಲೆಗೊಳಿಸುವ ಕ್ರಿಯೆ, ಮಾರ್ಗಗಳನ್ನು ಮಾತ್ರ ನಾವು ಅಚ್ಚುಕಟ್ಟಾಗಿ ಮತ್ತು ಪ್ರಜ್ಞಾಪೂರ್ವಕವಾಗಿ ರೂಪಿಸಬೇಕಾಗಿದೆ. ಪ್ರಾಚೀನ ಕಾಲದಿಂದಲೂ ಮನುಷ್ಯ ಜೀವನವನ್ನು ಉನ್ನತೀಕರಿಸುವ ಕ್ರಿಯೆಯಲ್ಲಿ ಶಿಕ್ಷಣವನ್ನು ಪ್ರಧಾನವಾಗಿ ಬಳಸಿಕೊಂಡಿರುವುದನ್ನು

ಗಮನಿಸಬಹುದಾಗಿದೆ. ಘಟಿಕಾಲಯ, ಅಗ್ರಹಾರ, ಧರ್ಮಪುರಿಗಳನ್ನು ಸ್ಥಾಪಿಸಲು ರಾಜರು ಅನೇಕ ದತ್ತಿಗಳನ್ನು ನೀಡಿದ್ದಾರೆ. ಶಾಸ್ತ್ರಗಳ ಕಲಿಕೆಗಾಗಿಯೆ ಪ್ರತ್ಯೇಕ ಉಪಾಧ್ಯಾಯರಿರುತ್ತಿದ್ದರು. ದೊಡ್ಡ ಗ್ರಂಥಾಲಯಗಳನ್ನು ಸ್ಥಾಪಿಸಲಾಗುತ್ತಿತ್ತು. ಆದರೆ ಇವೆಲ್ಲ ಜನಸಾಮಾನ್ಯರಿಗೆ ಬಾಗಿಲು ತೆರೆದಿರಲಿಲ್ಲ.

➤ ಶಿಕ್ಷಣವೆಂಬ ಪ್ರಜಾ ಸುಧಾರಣಾ ಕಲ್ಪನೆ

೧೯೬೬-೬೭ ಡಾ.ಸರ್ವಪಲ್ಲಿ ರಾಧಾಕೃಷ್ಣನ್ ನೇತೃತ್ವದ ವಿಶ್ವವಿದ್ಯಾಲಯದ ಶಿಕ್ಷಣ ಆಯೋಗವು ಇಟ್ಟುಕೊಂಡ ಮಾರ್ಗದರ್ಶಿ ಸೂತ್ರಗಳು ಹೀಗಿವೆ. ಶಿಕ್ಷಣದಿಂದ ಜ್ಞಾನ ಮತ್ತು ವಿವೇಕಗಳು ವಿದ್ಯಾರ್ಥಿಗೆ ಲಭಿಸಬೇಕು. ಸ್ವಯಂ ವಿಕಾಸ ಮತ್ತು ಆ ಮೂಲಕ ಸಮಾಜವಿಕಾಸ ಎರಡೂ ಏಕಕಾಲದಲ್ಲಿ ನಡೆಯಬೇಕು. ಮೌಲ್ಯಾಧಾರಿತವೂ ಮತ್ತು ಸಂಸ್ಕೃತಿ ಪೋಷಕವೂ ಆದ ಶಿಕ್ಷಣ ಅದು ನಿರಂತರ ಕಲಿಕೆಯಾಗಿರಬೇಕು. ಆ ಮೂಲಕ ಪ್ರಜಾಪ್ರಭುತ್ವವನ್ನು ಯಶಸ್ಸುಗೊಳಿಸಲು ವಿದ್ಯಾರ್ಥಿ ತಯಾರಾಗಬೇಕು.

ಭಾರತಕ್ಕೆ ಸ್ವಾತಂತ್ರ್ಯ ಬಂದ ತರುವಾಯ ಈ ಚಿಂತನ ಕ್ರಮಗಳಿದ್ದವು. ಯಾಕೆಂದರೆ ಗ್ರಾಮ ಭಾರತವನ್ನು ಅಭ್ಯುದಯಗೊಳಿಸುವ ಅಗತ್ಯ ಆ ಕಾಲಕ್ಕೆ ತೀವ್ರವಾಗಿತ್ತು. ಶಿಕ್ಷಣ ಅಭಿವೃದ್ಧಿಯ ಸಂಕೇತ ಮಾತ್ರವಾಗಿ ಇರದೆ ಅದು ನೈತಿಕವಾಗಿಯೂ ಇರಬೇಕು ಎನ್ನುವುದು ಗಾಂಧೀಜಿಯವರ ನಿಲುವಾಗಿತ್ತು. ಅದಕ್ಕಿಂತ ಮೊದಲೇ ಇದ್ದ ವಸಾಹತುಶಾಹಿ ಆಡಳಿತ ವ್ಯವಸ್ಥೆ ಶಿಕ್ಷಣವನ್ನು ಒಂದು ಭಾಷಾ ಕಲಿಕೆಯ ಪ್ರಯೋಗದಂತೆ ರೂಪಿಸಿತು. ಮೆಕಾಲೆ ಮಿನಿಟ್ "ನಮ್ಮ ಮತ್ತು ನಾವು ಆಳುವ ಲಕ್ಷಾಂತರ ಜನರ ನಡುವೆ ಮಧ್ಯವರ್ತಿಗಳಾಗಿ ಕಾರ್ಯ ನಿರ್ವಹಿಸುವ ಒಂದು ವರ್ಗವನ್ನು ಸೃಷ್ಟಿಸುವ ಕೆಲಸ ಮಾಡಲು ಶ್ರಮಿಸಬೇಕು. ಈ ವರ್ಗದ ಜನ ರಕ್ತ ಮತ್ತು ಬಣ್ಣದಿಂದ ಭಾರತೀಯರಾಗಿದ್ದು ಅಭಿರುಚಿಯಲ್ಲಿ, ಅಭಿಪ್ರಾಯಗಳಲ್ಲಿ, ನೀತಿ ನಿರೂಪಣೆಯಲ್ಲಿ ಮತ್ತು ಬೌದ್ಧಿಕತೆಯಲ್ಲಿ ಇಂಗ್ಲೀಷರಂತಿರಬೇಕು" ಎಂಬ ಆಶಯ ಹೊಂದಿತ್ತು. ಆ ಮೂಲಕ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯೆಂಬುದು ಗುಮಾಸ್ತರನ್ನು ತಯಾರಿಸುವ ಕಾರ್ಖಾನೆಯಾಗಿತ್ತು. ಭಾರತೀಯರ ಸೃಜನಶೀಲ ಶಕ್ತಿಯನ್ನು ಧ್ವಂಸಗೊಳಿಸಿ ಅವರನ್ನು ಬ್ರಿಟಿಷ್ ಆಡಳಿತದ ಗುಲಾಮರನ್ನಾಗಿ ರೂಪಿಸುವುದೇ ಉದ್ದೇಶವಾಗಿತ್ತು.

ಇದರ ಮುಂದುವರಿದ ರೂಪದಂತೆ ಇವತ್ತಿನ ಭಾರತದ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ ಬೆಳೆದಿದೆ ಮತ್ತು ಪೋಷಿಸಲಾಗುತ್ತದೆ.

➤ ಶಿಕ್ಷಣವೆಂಬುದು ಉತ್ಪಾದನಾ ವ್ಯವಸ್ಥೆಯೇ?.

ಜಾಗತಿಕರಣದ ಸಂದರ್ಭದಲ್ಲಿ ಶಿಕ್ಷಣವನ್ನು ಒಂದು ಉತ್ಪಾದನಾ ವ್ಯವಸ್ಥೆಯನ್ನಾಗಿ ಗ್ರಹಿಸಲಾಗುತ್ತದೆ. ಹಾಗಾಗಿ ಮಾನವ ಶಕ್ತಿಯನ್ನು ಸಂಪನ್ಮೂಲ ಎಂದೇ ಗಣಿಸಲಾಗಿದೆ. ಇದರ ಮೂಲವನ್ನು ಪಂಚವಾರ್ಷಿಕ ಯೋಜನೆಯ ಕಾಲದಲ್ಲಿಯೇ ಗುರುತಿಸಬಹುದಾಗಿದೆ. ಕೈಗಾರೀಕರಣ ಮತ್ತು ಔದ್ಯೋಗಿಕ ಕ್ರಾಂತಿಯನ್ನು ಶೈಕ್ಷಣಿಕ ಬೆಳವಣಿಗೆಯೊಂದಿಗೆ ಸಮೀಕರಿಸಲಾಯಿತು. ತಾಂತ್ರಿಕ ಶಿಕ್ಷಣ ಮತ್ತು ವೈದ್ಯಕೀಯ ಶಿಕ್ಷಣಕ್ಕೆ ಹೆಚ್ಚು ಒತ್ತು ಲಭಿಸಿತು. ಸಾಮಾನ್ಯ ಶಿಕ್ಷಣ ಹಿಂತಳ್ಳಲ್ಪಡತೊಡಗಿತು.

ಸಾಮಾನ್ಯ ಶಿಕ್ಷಣವು ಮೌಲ್ಯಾಧಾರಿತ ರೂಪವನ್ನು ಆಧರಿಸಿತು. ಆದರೆ ಅದನ್ನು ಕೂಡಾ ಸರಿಯಾಗಿ ಜಾರಿಗೆ ತರಲಿಲ್ಲ. ಕೃಷಿ ಮತ್ತು ಗ್ರಾಮಾಭಿವೃದ್ಧಿಗೆ ಅಗತ್ಯವಾದ ಚಿಂತನೆಗಳನ್ನು ಅಲ್ಲಿ ಗಟ್ಟಿಯಾಗಿ ತಂದಿರಲಿಲ್ಲ. ಕೃಷಿ ಪ್ರಧಾನವಾದ ದೇಶವೊಂದು ತನ್ನ ಕ್ರಿಯಾತ್ಮಕತೆಯನ್ನು ರೂಪಿಸಿಕೊಳ್ಳುವಾಗ ಅದನ್ನು ಅದಕ್ಕೆ ಅಗತ್ಯವಾದ ಶೈಕ್ಷಣಿಕ ಬೆಂಬಲ ಸಿಗಲಿಲ್ಲ. ಯಾಕೆಂದರೆ ನಮ್ಮ ಶೈಕ್ಷಣಿಕ ಪಠ್ಯಗಳು ಹಾಗೂ ಕಲಿಕೆಯ ಮಾರ್ಗಗಳು ಪ್ರಾಯೋಗಿಕವಾಗಿ ಮತ್ತು ಪ್ರಾದೇಶಿಕವಾಗಿರದೆ ಪದವಿ ನೀಡುವ ಕರ್ತವ್ಯ ಮಾಡತೊಡಗಿದವು. ಇದರಿಂದ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆ ವಿಫಲತೆ ಕಾಣತೊಡಗಿತು.

ಆಧುನಿಕತೆಯ ಸಂದರ್ಭದಲ್ಲಿ ಉತ್ಪಾದನಾ ವ್ಯವಸ್ಥೆಯು ಬದಲಾಗತೊಡಗುತ್ತಿದ್ದಂತೆ ನಮ್ಮ ಶೈಕ್ಷಣಿಕ ನಿಲುವುಗಳಲ್ಲಿ ಸಾಕಷ್ಟು ಬದಲಾವಣೆಗಳನ್ನು ತರಲಾಯಿತು. ರಾಷ್ಟ್ರದ ಆದಾಯದ ಹೆಚ್ಚಳ ಮತ್ತು ಪ್ರಗತಿಯ ಗ್ರಾಫ್‌ನ ಏರುವಿಕೆ ಪ್ರಧಾನವಾದ ಆಶಯವಾಗಿದ್ದರಿಂದ ತಾಂತ್ರಿಕ ಶಿಕ್ಷಣಕ್ಕೆ ಹೆಚ್ಚು ಒತ್ತು ನೀಡಲಾಯಿತು. ಉತ್ಪಾದನೆಯ ಹೆಚ್ಚಳಕ್ಕೆ ಯುವ ಜನರ ಜ್ಞಾನವನ್ನು ಬಳಸಿಕೊಳ್ಳಲು ಶಿಕ್ಷಣವನ್ನು ಮಾಧ್ಯಮವನ್ನಾಗಿ ಮಾಡಿಕೊಳ್ಳಲಾಯಿತು. ಇದರಿಂದ ಉತ್ಪಾದನೆ ಮತ್ತು ಔದ್ಯೋಗಿಕ ರಂಗಗಳಲ್ಲಿ ಬಾರಿ ಬದಲಾವಣೆ ಸಂಭವಿಸಿತು. ಸ್ವಾತಂತ್ರೋತ್ತರ ಭಾರತದ ಅಭ್ಯುದಯದ ಕನಸುಗಳು ಸಾಕಾರಗೊಳಿಸಲು

ಅನುಕೂಲವಾಗುವಂತಹ ಹಲವು ಕಾರ್ಯನೆಗಳು ದೇಶದಾದ್ಯಂತ ತೆರೆಯಲ್ಪಟ್ಟವು. ಆದರೆ ಅದಕ್ಕೆ ಅನುಗುಣವಾಗಿ ಶೈಕ್ಷಣಿಕ ರಂಗ ಹಾಗೂ ಉತ್ಪಾದಕ ರಂಗಗಳು ಅನೋನ್ಯತೆಯನ್ನು ಸಾಧಿಸದೆ ಹೋದವು. ಇದರಿಂದಾಗಿ ಸಾಮಾನ್ಯ ಜನರು ಮತ್ತು ಎಲೈಟ್ ಜನರೆಂಬ ಎರಡು ವರ್ಗಗಳು ಬೆಳೆಯತೊಡಗಿದವು. ಜ್ಞಾನಾಧಾರಿತ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಗೆ ಬದಲಾಗಿ ಔದ್ಯೋಗಿಕ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯಿಂದಾಗಿ ಖಾಸಗೀಕರಣಕ್ಕೆ ಹೆಚ್ಚು ಒತ್ತು ಸಿಗತೊಡಗಿತು. ಶಿಕ್ಷಣ ವ್ಯಾಪಾರೀಕರಣಕ್ಕೆ ಒಳಗಾಯಿತು. ಅದೊಂದು ಉತ್ಪಾದನಾ ವ್ಯವಸ್ಥೆಯನ್ನು ಪುನರ್ರಚಿಸುವ ವ್ಯವಸ್ಥೆಯಾಗಬೇಕಿತ್ತು, ಆದರೆ ಅದೆ ಉತ್ಪಾದಕ ಸಂಗತಿಯಾಯಿತು.

> ### ಖಾಸಗೀಕರಣದ ಭರಾಟೆ

ಇತ್ತೀಚಿಗೆ ಪದವಿ ಮತ್ತು ಸ್ನಾತಕೋತ್ತರ ಕಾಲೇಜುಗಳ ಸಂಖ್ಯೆ ಹೆಚ್ಚಾಗುತ್ತಿದೆ. ಪ್ರತಿಯೊಬ್ಬರೂ ಪದವೀಧರರಾಗಬೇಕೆಂಬ ಸರ್ಕಾರದ ನಿಲುವು ಸಾಮಾಜಿಕ ಸಮಾನತೆಯ ಕನಸಿನ ಆಡಳಿತದ ಭಾಗವೆಂದು ಪರಿಗಣಿಸಬಹುದಾದರೂ ಅದರಿಂದ ಹೊರಬರುವ ಪದವೀಧರರ ಭವಿಷ್ಯದ ಬಗ್ಗೆ ಯಾವುದೆ ವಿವೇಚನೆಗಳಿಲ್ಲದಿರುವುದು ವಾಸ್ತವ ಸಂಗತಿಯಾಗಿದೆ. ಯಾವ ತಾಂತ್ರಿಕ ಅಥವಾ ಔದ್ಯೋಗಿಕ ತರಬೇತಿಗಳೂ ಅವರಿಗೆ ನಾವು ನೀಡಿಲ್ಲ. ಕೇವಲ ಪ್ರಾಯೋಗಿಕವಲ್ಲದ ಪಠ್ಯಗಳನ್ನು ಅಲ್ಲಿ ಬೋಧಿಸಲಾಗುತ್ತಿದೆ. ಇದರಿಂದ ಅವರು ಮೂಲ ನೆಲೆಗೂ ವಾಪಾಸಾಗದೆ, ಆಧುನಿಕ ವ್ಯವಸ್ಥೆಯಲ್ಲಿಯೂ ಭಾಗೀದಾರರಾಗದೆ ಅತ್ಯಂತ ಕಡಿಮೆ ಸಂಬಳದ ಕೂಲಿಗಳಾಗಿ ಬದಲಾಗುತ್ತಿದ್ದಾರೆ. ಕಾರ್ಪೋರೇಟ್ ವ್ಯವಸ್ಥೆಗೂ ಇದೆ ಬೇಕಾಗಿರುವುದು. ಹಾಗಾಗಿಯೇ ಖಾಸಗಿ ಮತ್ತು ಸರ್ಕಾರಿ ಶಿಕ್ಷಣ ಸಂಸ್ಥೆಗಳ ನಡುವೆ ಅಗಾಧ ಕಂದರ ಸೃಷ್ಟಿಯಾಗಿದೆ. ಸಾಮಾಜಿಕ ಅಸಮಾನತೆಗಳನ್ನು ಸೃಷ್ಟಿಸಿದೆ. ಇದು ಸಂವಿಧಾನ ವಿರೋಧಿಯಾಗಿದೆ. ಆದಾಗ್ಯೂ ಖಾಸಗಿ ಲಾಭಿ ಸರ್ಕಾರಿ ವ್ಯವಸ್ಥೆಯನ್ನು ಅಚ್ಚುಕಟ್ಟಾಗಿ ನಿಯಂತ್ರಿಸುತ್ತಿದೆ, ಅದರ ಎಲ್ಲ ಪಾಲುದಾರರೂ ನಾವೆ ಆಗಿದ್ದೇವೆ.

ಹೋಗಲಿ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನಾದರೂ ಇಂತಹ ಶಕ್ತಿಗಳಿಂದ ಬಂದ ಮುಕ್ತಗೊಳಿಸುವ ದಿಟ್ಟತನವನ್ನು ಸರ್ಕಾರ ಕೈಗೊಳ್ಳಬೇಕಿದ್ದಿತು. ಸರ್ವರಿಗೂ ಶಿಕ್ಷಣ ನೀಡಬೇಕು ಎನ್ನುವ ಮಹತ್ವಾಕಾಂಕ್ಷೆಯೊಂದು ಸರ್ಕಾರದ ಆಧ್ಯತೆಯಾಗಬೇಕಿದೆ. ಹಾಗೆಯೆ ಪ್ರಾಥಮಿಕ ಶಿಕ್ಷಣವನ್ನು ಸಾರ್ವತ್ರೀಕರಣ ಹಾಗೂ ಉಚಿತಗೊಳಿಸುವುದು ಸಾಂವಿಧಾನಿಕ ನಿಲುವಿನ ಮುಂದುವರಿದ ಭಾಗವಾಗಬೇಕಿದೆ. ಆದರೆ ಇಲ್ಲಿಂದಲೇ ಅಸಮಾನತೆಗಳನ್ನು ಕಣ್ಣಿಗೆ ರಾಚುವಂತೆ ಪೋಷಿಸಲಾಗುತ್ತಿದೆ. ಬದುಕನ್ನು ಕಲಿಸುವ ಶಿಕ್ಷಣವ್ಯವಸ್ಥೆ ಈಗ ನಮ್ಮಲ್ಲಿ. ನೈತಿಕ ಮೌಲ್ಯಗಳು ಹಾಗೂ ಜೀವನಪ್ರೀತಿಯನ್ನು ಒಳಗೊಂಡ ಪಠ್ಯಗಳು ಅವಿಭಾಜ್ಯ ಅಂಗವಾಗಬೇಕಿತ್ತು. ಆದರೆ ಬಾಯಿಪಾಠ ಹಾಗೂ ಕೈಗೆ ನಿಲುಕದ ಪಠ್ಯಗಳನ್ನು ತುಂಬಲಾಗುತ್ತದೆ.

೧೯೮೬ರಲ್ಲಿ ಜಾರಿಗೆ ಬಂದ ರಾಷ್ಟ್ರೀಯ ಶಿಕ್ಷಣ ನೀತಿಯು ಎಂಟನೆಯ ತರಗತಿಯವರೆಗೂ ಉಚಿತ ಮತ್ತು ಕಡ್ಡಾಯ ಶಿಕ್ಷಣ ನೀತಿಯನ್ನು ಜಾರಿಗೊಳಿಸಿದೆ. ಗುಣಾತ್ಮಕ ಶಿಕ್ಷಣ ಮತ್ತು ಮೂಲಭೂತ ಸೌಲಭ್ಯಗಳ ನಿರ್ಮಾಣದೊಂದಿಗೆ ರಚನಾತ್ಮಕ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯೊಂದನ್ನು ರೂಪಿಸುವುದು ಅದರ ಆಧ್ಯ ಕರ್ತವ್ಯವಾಗಿದೆ. ಆ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಸ್ವಾವಲಂಭಿಗೊಳಿಸುವುದು, ನೈತಿಕವಾಗಿ ಬಲಪಡಿಸುವುದು ಅದರ ಉದ್ದೇಶವಾಗಿದೆ.

ನಮ್ಮ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ಪಾಶ್ಚಿಮಾತ್ಯ ಕಣ್ಣುಗಳಿಂದ ಅಥವಾ ಪರಂಪರೆಯ ದೃಷ್ಟಿಕೋನದಿಂದ ನೋಡಲಾಗದು. ಅವೆರಡೂ ಅಪಾಯದ ಇಬ್ಬಾಯ ಖಡ್ಗವಾಗಿದೆ. ಪರಂಪರೆಯ ಹೆಸರಿನ ಜಾತಿವಾದಿ ಮತ್ತು ಮತೀಯ ಶಿಕ್ಷಣವ್ಯವಸ್ಥೆ ಎಷ್ಟೋ ಏಕಲವ್ಯರನ್ನು ಬಲಿ ತೆಗೆದುಕೊಂಡಿರುವುದನ್ನು ಭಾರತೀಯ ಚರಿತ್ರೆ ಉಸಿರೊಡೆಯದೆ ಕುಳಿತಿದ್ದರೆ ವೈದಿಕ ವ್ಯವಸ್ಥೆ ಅದಕ್ಕೆ ಹೊಸಭಾಷ್ಯ ಬರೆದು ತನ್ನ ಉದರದಲ್ಲಿ ಅರಗಿಸಿಕೊಂಡಿದೆ. ಮೇಲೆ ಹರಿಯುವ ನೀರು ಮೇಲೆ ಹರಿಯಬೇಕು ಮತ್ತು ಕೆಳಗೆ ಹರಿಯುವ ನೀರು ಕೆಳಗೆ ಹರಿಯಬೇಕೆನ್ನುವ ತಾತ್ವಿಕತೆಯನ್ನು ಅಚ್ಚುಕಟ್ಟಾಗಿ ಮಂಡಿಸಲಾಗಿದ್ದನ್ನು ಪ್ರಶ್ನೆ ಮಾಡಲಾರದಷ್ಟು ವ್ಯವಸ್ಥೆ ಬರಡಾಗಿದೆ ಮತ್ತು ಸೃಷ್ಟಿಯ ನಿಯಮವೆಂಬಂತೆ ಸ್ವೀಕರಿಸುವುದನ್ನು ನಮಗೆ ಹೇಳಿಕೊಡಲಾಗಿದೆ.

ಬಿಡುಗಡೆಯನ್ನು ಕಾಣಬೇಕಾದರೆ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆ ಇನ್ನಷ್ಟು ಹೊರಕೊಂಬೆಗಳನ್ನು ಚಾಚಬೇಕೆಂಬ ಆಲೋಚನೆಯು ಪಾಶ್ಚಿಮಾತ್ಯ ಶಿಕ್ಷಣ ವ್ಯವಸ್ಥೆಯನ್ನು ತನ್ನೊಳಗೆ ತಂದುಕೊಂಡಿತು. ಪಠ್ಯಗಳು ಮತ್ತು ವೇಷಭೂಷಣಗಳು ಸಾರಾಸಗಟಾಗಿ ಆಮದಾದವು, ಆದರೆ ಭಾರತೀಯ ಸಾಮಾಜಿಕ ವ್ಯವಸ್ಥೆ ಮತ್ತು ಇಲ್ಲಿನ ಸಾಂಸ್ಕೃತಿಕ ವ್ಯವಸ್ಥೆಗೂ ಯಾವ ಅನುರೂಪತೆಯೂ ಲಭಿಸದೆ ಎಲೈಟ್ ಮಾದರಿಯ ಮತ್ತು ಅಸಹನೆಯುಳ್ಳ ಪೀಳಿಗೆಯೊಂದು ರೂಪುಗೊಳ್ಳುವಂತಾಯಿತು. ಇದರಿಂದ ಪ್ರಜಾಪ್ರಭುತ್ವದ ಯಾವ ಉದ್ದೇಶಗಳು ಈಡೇರದೆ ಸಂವಿಧಾನದ ಆಶಯಗಳು ಭಾಷಣಕ್ಕೆ ಸೀಮಿತಗೊಂಡವು.

ಇತ್ತೀಚಿನ ದಿನಗಳಲ್ಲಿ ವೃತ್ತಿಪರ ಹಾಗೂ ಕರಕುಶಲ ಕಲೆಗಳಿಗೆ ಆದ್ಯತೆ ನೀಡಬೇಕೆನ್ನುವ ಕೂಗು ಬಲವಾಗಿ ಕೇಳತೊಡಗಿದೆ. ಕೊರೊನಾ ಬಂದ ಮೇಲೆ ಪಟ್ಟಣದಲ್ಲಿದ್ದ ಸಣ್ಣ ಅತಿ ಸಣ್ಣ ಉದ್ದಿಮೆದಾರರು, ಕಾರ್ಮಿಕರು, ಸಹಾಯಕರು ಸಾರಾಸಗಟಾಗಿ ಹಳ್ಳಿಗೆ ವಾಪಾಸಾಗಿದ್ದಾರೆ. ಹೀಗೆ ವ್ಯಾಪಕವಾಗಿ ಬಂದ ಜನರಿಗೆ ಪರ್ಯಾಯ ಉದೋಗಗಳಿಲ್ಲ. ಅವರೆಲ್ಲ ಇರುವ ಕೃಷಿ ಭೂಮಿಯನ್ನೆ ಅವಲಂಬಿಸಬೇಕಾಗುತ್ತದೆ. ಇದರಿಂದ ಕೃಷಿಯ ಮೇಲೆ ಒತ್ತಡ ಹೆಚ್ಚಾಗಿ ಕೌಟುಂಬಿಕ ಸಂಘರ್ಷಗಳು ಹೆಚ್ಚಾಗಬಹುದು. ಇದರಿಂದ ಪರ್ಯಾಯ ವೃತ್ತಿಗಳಿಗೆ ತರಬೇತಿ, ಮಾರ್ಗದರ್ಶನ, ಮಾರುಕಟ್ಟೆಗಳನ್ನು ಸೃಷ್ಟಿಸಬೇಕಿದೆ. ಆಗ ಸಹಜವಾಗಿ ವೃತ್ತಿಪರ, ಕರಕುಶಲ ಕಲೆಗಳನ್ನು ಅಲ್ಪಾವಧಿಯಲ್ಲಿ ಮತ್ತು ದೂರಗಾಮಿ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯಲ್ಲಿ ರೂಪಿಸಬೇಕಾಗಿದೆ.ಆಗ ನಿರುದ್ಯೋಗ ದಿಢೀರ್ ತಲೆದೋರದೆ ದೇಶದ ಆರ್ಥಿಕ ಪ್ರಗತಿಯಲ್ಲಿ ವೃತ್ಯ ಉಂಟಾಗದು.

> ### ಕನ್ನಡ ಪದಗೋಳ್ ನುಗ್ಗಿ

ಭಾರತದಲ್ಲಿ ೨೦೦೧ರ ಜನಗಣತಿಯ ಪ್ರಕಾರ ೧೨೨ ಭಾಷೆಗಳಿವೆ. ಇವುಗಳಲ್ಲಿ ಹತ್ತು ಲಕ್ಷಕ್ಕೂ ಹೆಚ್ಚು ಜನರು ಆಡುವಂತಹ ನುಡಿಗಳು ೨೨. ಹತ್ತು ಸಾವಿರ ಜನರು ಆಡುವಂತಹ ಭಾಷೆಗಳು ಸುಮಾರು ೧೦೦. ಶಿಕ್ಷಣದ ಗುಣಮಟ್ಟವನ್ನು ಹೆಚ್ಚಿಸಲು ತಾಯ್ನುಡಿಯ ಮೂಲಕ ಕಲಿಯುವ ಅವಕಾಶ ಕಲ್ಪಿಸುವುದು. ಸಮುದಾಯದ ಶಿಕ್ಷಣದಲ್ಲಿ ಭಾಷೆಗೆ ಸಿಗದಿರುವ ಮಹತ್ವವನ್ನು ನೀಡಬೇಕು. ಸಮೂಹ ಸಂಪರ್ಕದ ಭಾಷೆಯನ್ನಾಗಿ ಆರಂಭಿಸಬೇಕು. ಅದಕ್ಕಿಂತ ಮೊದಲು ತಾಯಿ ನುಡಿಯಲ್ಲಿ ಆಕರಗಳ ಕೊರತೆಯಾಗದಂತೆ ತಕ್ಷಣ ಕಾರ್ಯಪ್ರವರ್ತರಾಗಬೇಕಿದೆ. (ಇದಕ್ಕೆ ಉದಾಹರಣೆಯೆಂದರೆ ಶ್ರೀ ಅಶೋಕ ಸಾಶೆಯವರು ತಾಂತ್ರಿಕ ಜ್ಞಾನವನ್ನು ಹೆಚ್ಚಿಸಲು ಕನ್ನಡದಲ್ಲಿ ಲೋಹ ಕಾರ್ಯ ಎನ್ನುವ ತಾಂತ್ರಿಕ ಮಾಸಪತ್ರಿಕೆಯನ್ನು ೨೦೧೮ ರಿಂದ ಹೊರತರುತ್ತಿದ್ದಾರೆ). ತಂತ್ರಜ್ಞಾನ, ಹಾಗೂ ವೈದ್ಯಕೀಯ, ಕೃಷಿ ವಿಜ್ಞಾನದ ಪಾರಿಭಾಷಿಕ ಶಬ್ದಗಳಿಗೆ ಅಗತ್ಯವಾದ ನಿಘಂಟುಗಳನ್ನು ಹೆಚ್ಚು ಹೆಚ್ಚು ತರಬೇಕಿದೆ.

ಅಂತಿಮವಾಗಿ

ಶಿಕ್ಷಣವೆಂದರೆ ಮನುಷ್ಯನ ಪ್ರಜ್ಞೆಯನ್ನು ವಿಸ್ತಾರಗೊಳಿಸುವುದು. ವ್ಯಕ್ತಿತ್ವವೊಂದರ ವಿಕಾಸದ ದಾರಿ. ರಾಷ್ಟ್ರವೊಂದರ ಉದ್ದೇಶವನ್ನು ಉತ್ಕೃಷ್ಟ ನೆಲೆಗೆ ಕೊಂಡೊಯ್ಯುವ ಸಾಧನ. ಭವ್ಯ ಭವಿಷ್ಯತ್ತನ್ನು ನಿರ್ಮಾಣ ಮಾಡಬೇಕೆಂದರೆ ಅತ್ಯುಚ್ಚ ಶಿಕ್ಷಣವನ್ನು ನೀಡುವ ಕನಸು ಕಾಣಬೇಕು ನಿಜ, ಆದರೆ ಕನಸು ಕಂಡರೆ ಸಾಲದು. ಅದನ್ನು ಈಡೇರಿಸುವ ಹಾದಿಯಲ್ಲಿ ನಾವು ಶುದ್ಧ ಹಾಗೂ ಗಟ್ಟಿ ಹೆಜ್ಜೆಗಳನ್ನು ಇಡಬೇಕು. ಆದರೆ ನಾವು ವಾಸ್ತವದಲ್ಲಿ ಅದರಲ್ಲಿ ವಿಫಲವಾಗಿದ್ದೇವೆ. ಶಿಕ್ಷಕರ ನೇಮಕಾತಿಗಳಲ್ಲಿ ಭ್ರಷ್ಟಾಚಾರ, ಪಠ್ಯಗಳ ರಚನೆ ದೂರದೃಷ್ಟಿತ್ವ ಇಲ್ಲದಿರುವುದು, ಖಾಸಗೀಕರಣದ ಲಾಭಿಯಿಂದಾಗಿ ಸೊರಗುತ್ತಿರುವ ಸರ್ಕಾರಿ ಸಂಸ್ಥೆಗಳು, ಸಂಬಳಕ್ಕಾಗಿ ಇರುವ ಶಿಕ್ಷಕರು, ಅವರನ್ನು ಇತರ ಎಲ್ಲಾ ಕೆಲಸಗಳಿಗೆ ದುಡಿಸಿಕೊಳ್ಳುವ ಸರ್ಕಾರ ಇವೆಲ್ಲ ಭಾರತದ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯನ್ನು ಭಿದ್ರಗೊಳಿಸುತ್ತಿವೆ. ಅವೈಜ್ಞಾನಿಕ , ಜಾತಿ ಆಧಾರಿತ, ಪ್ರತಿಭಾ ವಿರೋಧಿ ಶಿಕ್ಷಕ ನೇಮಕಾತಿಗಳಂತೂ ಇನ್ನೆಂದೂ ಈ ದೇಶದ ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯನ್ನು ಸರಿಪಡಿಸಲಾಗದಷ್ಟು ನಾವು ಮುಂದೆ ಹೋಗಿದ್ದೇವೆ.

ಶೈಕ್ಷಣಿಕ ವ್ಯವಸ್ಥೆಯೊಂದನ್ನು ಶುದ್ಧವಾಗಿ ನಿರ್ಮಿಸಿದರೆ ಅದರಿಂದ ಉತ್ಪಾದಿತ ವ್ಯಕ್ತಿಗಳು ಶುದ್ಧ ಸಮಾಜವೊಂದನ್ನು ನಿರ್ಮಿಸಬಲ್ಲರು. ಪ್ರಜಾಪ್ರಭುತ್ವ ದೇಶದ ಕನಸುಗಳು ತನ್ನಷ್ಟಕ್ಕೆ ತಾನೆ ಸಾಕಾರಗೊಳ್ಳಬಲ್ಲವು.

ಪರಾಮರ್ಶನಾ ಗ್ರಂಥಗಳು:–

೧. ಕನ್ನಡ ಪ್ರಜ್ಞೆಯ ಸುತ್ತಮುತ್ತ– ಡಾ.ಗೀತಾ ಡಿ.ಸಿ (ಸಂ)– ಕ್ರಿಯಾ ಮಾಧ್ಯಮ ಬೆಂಗಳೂರು, ೨೦೨೧.

೨. ಯಾರಿಗೆ ಪ್ರಜಾಪ್ರಭುತ್ವ– ಜಾವಿದ್ ಆಲಂ. ಪ್ರಸಾರಾಂಗ ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ ಹಂಪಿ, ೨೦೧೦

೩. ಟೀಕೆ–ಟಿಪ್ಪಣಿ ಸಂಪುಟ–೦೨. – ಲಂಕೇಶ್, ಲಂಕೇಶ್ ಪ್ರಕಾಶನ ಬೆಂಗಳೂರು. ೨೦೦೯

೪. ಜಾಗತೀಕರಣ ಒಂದು ಸಮಗ್ರ ಮಂಥನ–ಡಾ. ರಾಜೇಂದ್ರ ಚೆನ್ನಿ (ಸಂ). ಕರ್ನಾಟಕ ಸಾಹಿತ್ಯ ಅಕಾಡೆಮಿ, ಬೆಂಗಳೂರು. ೨೦೦೭

೫. ರಾಜಕೀಯ ಬಡತನ– ಡಾ. ಎಂ ಚಂದ್ರಪೂಜಾರಿ. ಸಿದ್ಧಾರ್ಥ ಪ್ರಕಾಶನ.ಹೊಸಪೇಟೆ. ೨೦೦೯

"ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮೇಲೆ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಪ್ರಭಾವ ಕುರಿತು ಅಧ್ಯಯನ"

ದೇವರಾಜ.ಎನ್.,

ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಎಸ್.ಜೆ.ಜಿ ಕಾಲೇಜ್ ಅಫ್ ಎಜುಕೇಶನ್, ಆನಂದಪುರ,

ರಿಚರ್ಡ್ ಡಿಕೋಸ್ತ.,

ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಎಸ್.ಜೆ.ಜಿ ಕಾಲೇಜ್ ಅಫ್ ಎಜುಕೇಶನ್, ಆನಂದಪುರ,

ಆಶೋಕ.ಎಂ.,

ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಎಸ್.ಜೆ.ಜಿ ಕಾಲೇಜ್ ಅಫ್ ಎಜುಕೇಶನ್, ಆನಂದಪುರ,

ಸಾರಾಂಶ

ಶಿಕ್ಷಣವು ಮಾನವ ಸಮಾಜದ ಅಭಿವೃದ್ಧಿಗೆ ಅವಿಭಾಜ್ಯ ಅಂಶವಾಗಿದೆ, ಮತ್ತು ಅದನ್ನು ಯಶಸ್ವಿಯಾಗಿ ಸಾಧಿಸಲು ಬೋಧಕರ ಪಾತ್ರ ಅತ್ಯಂತ ಮುಖ್ಯವಾಗಿದೆ. ಬೋಧಕರ ಮಾರ್ಗದರ್ಶನ ಮತ್ತು ಪ್ರೇರಣಾ ಶಕ್ತಿಯ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಬೆಳವಣಿಗೆಯಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತದೆ. ಬಿ.ಇಡಿ (ಬ್ಯಾಚೆಲರ್ ಅಫ್ ಎಜುಕೇಶನ್) ವಿದ್ಯಾರ್ಥಿಗಳು ಭವಿಷ್ಯದ ಬೋಧಕರಾಗಬೇಕಾದ ಕಾರಣ, ಅವರ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಕೇವಲ ಅಕಾಡೆಮಿಕ್ ಮಟ್ಟಕ್ಕೆ ಸೀಮಿತವಲ್ಲ; ಅದು ಬೋಧನೆಯತಂತ್ರ, ವ್ಯಕ್ತಿತ್ವ ವಿಕಸನ, ಮತ್ತು ಬೋಧನಾ ಮಾರ್ಗದರ್ಶನದ ಮೇಲೂ ಅವಲಂಬಿತವಾಗಿದೆ.

ಪ್ರೇರಣೆ (ಮೋಟಿವೇಶನ್) ಎಂಬುದುಕಲಿಕೆಯಲ್ಲಿ ನಿರಂತರ ಪ್ರಗತಿಯುಂಟು ಮಾಡುವ ಪ್ರಾಥಮಿಕಲಂಶವಾಗಿದ್ದು, ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಉತ್ಸಾಹ, ನಿಸ್ಸಂಶಯ ಹಾಗೂ ನಿರಂತರ ಕಲಿಕೆಯ ಇಚ್ಛೆಯನ್ನು, ಉಂಟುಮಾಡುತ್ತದೆ. ಬೋಧಕರು ಉಪಯೋಗಿಸುವ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು, ಅವರ ಬೋಧನಾ ಶೈಲಿ, ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳೊಂದಿಗೆ ಹೊಂದಾಣಿಕೆಯ ಧೋರಣೆಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ನೇರವಾಗಿ ಪರಿಣಾಮ ಬೀರುತ್ತವೆ. ಈ ಅಧ್ಯಯನವು ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆಏಷ್ಟು ಪರಿಣಾಮಕಾರಿಯಾಗಿ ಪ್ರಭಾವಿಸುತ್ತವೆ ಎಂಬುದನ್ನು ವಿಶ್ಲೇಷಿಸುತ್ತದೆ.

ಭಿನ್ನ ವ್ಯಕ್ತಿತ್ವಗಳಿರುವ ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳು ವಿವಿಧರೀತಿಯ ಪ್ರೇರಣೆಯನ್ನು ಅಗತ್ಯವಿರುವ ಸಂದರ್ಭದಲ್ಲಿ, ಬೋಧಕರು ಅವರ ಅಗತ್ಯಗಳಿಗೆ ಅನುಗುಣವಾದ ತಂತ್ರಗಳನ್ನು ಬಳಸುವುದರಿಂದ, ಕಲಿಕಾ ಪ್ರಕ್ರಿಯೆಯ ಉತ್ತಮ ನಿರ್ವಹಣೆ ಸಾಧ್ಯವಾಗುತ್ತದೆ. ಈ ಅಧ್ಯಯನವು, ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ಸುಧಾರಿಸುತ್ತವೆಯೇ ಎಂಬುದರ ಕುರಿತಾದ ಮಹತ್ವದ ಹಿನ್ನೋಟವನ್ನು ಒಳಗೊಂಡಿದೆ.

ಕೀಲಿ ಪದಗಳು: ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳು, ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ, ಪ್ರೇರಣೆ

ಪೀಠಿಕೆ:

ಶಿಕ್ಷಕರನ್ನು ಶೈಕ್ಷಣಿಕ ಕ್ಷೇತ್ರದ ಪ್ರಮುಖ ಶಕ್ತಿಯೆಂದು ಪರಿಗಣಿಸಲಾಗುತ್ತದೆ. ಅವರು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಬೋಧನೆ ನೀಡುವಲ್ಲಿ ಮಾತ್ರವಲ್ಲ, ಅವರ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಪ್ರೇರಣೆ ನೀಡುವ ಪ್ರಮುಖ ಮೂಲಗಳಾಗಿದ್ದಾರೆ. ಬಿ.ಇಡಿ (ಬ್ಯಾಚೆಲರ್ ಅಫ್ ಎಜುಕೇಶನ್) ವಿದ್ಯಾರ್ಥಿಗಳು ಭವಿಷ್ಯದ ಬೋಧಕರಾಗಿ ತಯಾರಾಗುವ ಹಂತದಲ್ಲಿದ್ದು, ಉತ್ತಮ ಮಾರ್ಗದರ್ಶನ ಮತ್ತು ಪ್ರೇರಣೆಯ ಅವಶ್ಯಕತೆಯಿದೆ. ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉತ್ಸಾಹ, ನಿಸ್ಸಂಶಯ ಮತ್ತು ದಿಟ್ಟತೆಯನ್ನು ನೀಡುವ ಮೂಲಕ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ಉತ್ತೇಜಿಸುತ್ತವೆ. ಬೋಧಕರ ಚಿಂತನೆಗಳು, ಶೈಕ್ಷಣಿಕ ಮಾರ್ಗದರ್ಶನಗಳು, ಮತ್ತು ವೈಯಕ್ತಿಕ ಬೆಂಬಲವು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಬೆಳವಣಿಗೆಯಲ್ಲಿ ಮತ್ತು ಸಾಧನೆಯಲ್ಲಿ ದೊಡ್ಡ ಪಾತ್ರವಹಿಸುತ್ತವೆ. ಬೋಧಕರ ಪ್ರೇರಣಾ ಶಕ್ತಿ ಮತ್ತು ಮಾರ್ಗದರ್ಶನವು ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಮುಖ್ಯ ಸ್ತಂಭಗಳಾಗಿವೆ. ಶೈಕ್ಷಣಿಕ ಪ್ರಗತಿಯ ಕೇವಲ ಪಠ್ಯ ಪಾಠಗಳ ಅಧ್ಯಯನಕ್ಕೆ ಸೀಮಿತವಾಗದೆ, ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳಿಂದವೂ ನಿರ್ಧಾರವಾಗುತ್ತದೆ. ಬಿ.ಇಡಿ (ಬ್ಯಾಚೆಲರ್ ಅಫ್ ಎಜುಕೇಶನ್) ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಭವಿಷ್ಯದಲ್ಲಿ ಬೋಧಕರಾಗಿ ಸಮಾಜದ ಮುಂದಿನ ಪೀಳಿಗೆಗೆ ಮಾರ್ಗದರ್ಶನ ನೀಡಲು ಸಜ್ಜಾಗುತ್ತಿರುವುದರಿಂದ, ಅವರ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮತ್ತು ವ್ಯಕ್ತಿತ್ವ ವಿಕಸನವು ಅವಶ್ಯಕತೆಯಾಗಿದೆ. ಈ ಹಿನ್ನೆಲೆಯಲ್ಲಿಯೇ ಬೋಧಕರು ತಾವು ಬಳಸುವ ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಯನ್ನು, ನೈತಿಕತೆಯನ್ನು, ಮತ್ತು ಶೈಕ್ಷಣಿಕ ಯಶಸ್ಸನ್ನು ಹೆಚ್ಚಿಸುತ್ತಾರೆ. ಈ ಲೇಖನವು, ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮೇಲೆ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಪ್ರಭಾವವನ್ನು ವಿಶ್ಲೇಷಿಸುತ್ತದೆ.

ಪ್ರೇರಣೆಯ ಪ್ರಾಮುಖ್ಯತೆ: ಪ್ರೇರಣೆ (ಮೋಟಿವೇಶನ್) ಎಂಬುದು ಬೋಧನಾ ಪ್ರಕ್ರಿಯೆಯಲ್ಲಿ ಅತ್ಯಂತ ಮುಖ್ಯ ಅಂಶವಾಗಿದೆ. ಅದು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉತ್ಸಾಹ, ಶ್ರದ್ಧೆ, ಮತ್ತು ದೃಢವಿಶ್ವಾಸವನ್ನು ನೀಡುತ್ತದೆ, ಇದು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ಪ್ರೇರೇಪಿಸುವ ಶಕ್ತಿ. ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ, ಬೋಧಕರು ನೀಡುವ ಪ್ರೇರಣೆಯ ಅವರ ಕಲಿಕೆಯ ದೃಷ್ಟಿಕೋನ, ಶೈಕ್ಷಣಿಕ ಉತ್ಸಾಹ, ಮತ್ತು ಗುರಿಯ ಸಾಧನೆಯ ಮೇಲೆ ನೇರವಾಗಿ ಪರಿಣಾಮ ಬೀರುತ್ತದೆ. ಪ್ರೇರಿತ ವಿದ್ಯಾರ್ಥಿಗಳು ಹೆಚ್ಚು ಕ್ರಿಯಾತ್ಮಕವಾಗಿ ಕಲಿಕೆಯ ಪ್ರವೃತ್ತಿಯನ್ನೇ ಹೊಂದಿದ್ದು, ತಮ್ಮ ಶೈಕ್ಷಣಿಕ ಗುರಿಗಳನ್ನು ಸುಲಭವಾಗಿ ಸಾಧಿಸಲು ಪ್ರಮಿಸುತ್ತಾರೆ.

ಸಂಶೋಧನಾ ಉದ್ದೇಶ:

1. ಈ ಸಂಶೋಧನೆಯ ಉದ್ದೇಶವು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮೇಲೆ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಪ್ರಭಾವವನ್ನು ಗುರುತಿಸುವುದು. ಅದರಲ್ಲೂ ವಿಶೇಷವಾಗಿ ಪ್ರೇರಣೆಯ ವೈವಿಧ್ಯಮಯ ತಂತ್ರಗಳು, ಉದಾಹರಣೆಗೆ, ವೈಯಕ್ತಿಕ ಚರ್ಚೆಗಳು, ಒತ್ತಾಯಮಾಡುವ ವೇದಿಕೆಗಳು, ಸಮಗ್ರ ಫೀಡ್‌ಬ್ಯಾಕ್, ಮತ್ತು ಶೈಕ್ಷಣಿಕ ದಕ್ಷತೆಯನ್ನು ಬೆಳೆಸುವ ಇತರ ತಂತ್ರಗಳನ್ನು ವಿಶ್ಲೇಷಿಸಲಾಗುತ್ತದೆ.

ಸಾಹಿತ್ಯಾವಲೋಕನ:

• **"ಅಧ್ಯಾಪಕರ ಪ್ರೇರಣಾ ಶೈಲಿಯ ಪ್ರಭಾವ"** ಕಿಲ್ಪಾತ್ರಿಕ್**(Kilpatrick, 2010)** ಅವರು ಮಾಡಿದ ಸಂಶೋಧನೆಯ ಪ್ರಕಾರ, ಬೋಧಕರ ಪ್ರೇರಣಾ ಶೈಲಿಯು ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ಗಟ್ಟಿಯಾಗಿ ಪ್ರಭಾವಿಸುತ್ತದೆ. ಅವರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಇಚ್ಛೆ, ಬೋಧನೆ, ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ಸಕ್ರಿಯ ಭಾಗವಹಿಸುವಿಕೆಗೆ ಒತ್ತಾಯ ನೀಡಿರುವುದು ಪ್ರಮುಖವಾಗಿದೆ. ಬೋಧಕರ ಸಕಾರಾತ್ಮಕ ಫೀಡ್‌ಬ್ಯಾಕ್ ಮತ್ತು ಉತ್ತೇಜನದ ಮೂಲಕ ವಿದ್ಯಾರ್ಥಿಗಳು ತಮಗೆ ಬೇಕಾದ ಕಲಿಕೆಯ ಗುರಿಗಳನ್ನು ಸಾಧಿಸುತ್ತಾರೆ ಎಂದು ಈ ಸಂಶೋಧನೆ ಕಂಡುಬಂದಿದೆ.

• **"ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮತ್ತು ಬೋಧಕರ ಮಾರ್ಗದರ್ಶನ"**, ಥೋರ್ಪ್ **(Thorpe, 2014)** ಅವರು ಮಾಡಿರುವ ಅಧ್ಯಯನ ಬೋಧಕರ ಮಾರ್ಗದರ್ಶನವು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಹೇಗೆ ಸಹಕಾರಿಯಾಗುತ್ತದೆ ಎಂಬುದರ ಕುರಿತು ವಿಶ್ಲೇಷಣ ಮಾಡಿದೆ. ಈ ಸಂಶೋಧನೆ ಪ್ರಕಾರ, ಬೋಧಕರು ನೀಡುವ ವೈಯಕ್ತಿಕ ಮಾರ್ಗಸೂಚನೆ ಮತ್ತು ಸಮರ್ಪಕ ಆಲೋಚನಾ ಪ್ರಕ್ರಿಯೆಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಶೈಕ್ಷಣಿಕ ಸವಾಲುಗಳನ್ನು ಸಮರ್ಥವಾಗಿ ಎದುರಿಸಲು ಸಹಕಾರಿಯಾಗಿವೆ.

• **"ಶಿಕ್ಷಕ–ವಿದ್ಯಾರ್ಥಿ ಸಂಬಂಧ ಮತ್ತು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ"**,ಹ್ಯಾರಿಸ್**(Harris, 2017)** ಅವರ ಅಧ್ಯಯನವು ಬೋಧಕರ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ನಡುವಿನ ಸಕಾರಾತ್ಮಕ ಸಂಬಂಧವು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ದೊಡ್ಡ ಮಟ್ಟದ ಪ್ರಭಾವ ಬೀರುತ್ತದೆ ಎಂಬುದನ್ನು ಬೆಳಗಿಸಿದೆ. ಈ ಸಂಬಂಧವು ಬೋಧಕರು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ನೀಡುವ ಪ್ರೋತ್ಸಾಹ, ಶ್ರದ್ಧೆ, ಮತ್ತು ಧೈರ್ಯ ತುಂಬುವ ಮಾತುಗಳ ಮೂಲಕ ನಿರ್ಮಾಣವಾಗುತ್ತದೆ. ಬೋಧಕರು ವಿದ್ಯಾರ್ಥಿಗಳ ಕಲಿಕೆಯ ನಿಲುವುಗಳನ್ನು ಬದಲಾಯಿಸಲು ಸಾಧ್ಯವಾಗುವುದರಿಂದ, ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಪರಿಣಾಮವು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯಲ್ಲಿ ನಿರ್ಣಾಯಕವೆಂದು ತೋರಿಸಲಾಗಿದೆ.

ಸಂಶೋಧನಾ ವಿಧಾನ ಮತ್ತು ತಂತ್ರಗಳು:

ಪ್ರಸ್ತುತ ಸಂಶೋಧನಾ ಅಧ್ಯಯನ ಕ್ಷೇತ್ರವನ್ನು ಶಿವಮೊಗ್ಗ ಜಿಲ್ಲೆಯ ಎಸ್.ಜೆ.ಜಿ ಶಿಕ್ಷಣ ಮಹಾವಿದ್ಯಾಲಯ, ಆನಂದಪುರದ 60 ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಸರಳ ಯಾದೃಚ್ಛಿಕ ವಿಧಾನದ ಮೂಲಕ ಆಯ್ಕೆ ಮಾಡಿಕೊಳ್ಳಲಾಗಿದೆ. ಈ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಮೌಲ್ಯಮಾಪನ ಚಟುವಟಿಕೆಗಳ ಮೂಲಕ, ವಿವಿಧ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳನ್ನು ಅನುಸರಿಸಿ, ಈ ತಂತ್ರಗಳ ಪ್ರಭಾವವನ್ನು ಮೌಲ್ಯಮಾಪನ ಮಾಡಲಾಯಿತು. ದತ್ತಾಂಶಗಳನ್ನು ಸಂಗ್ರಹಿಸಲು ಪ್ರಶ್ನಾವಳಿ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ವರದಿಗಳನ್ನು ಬಳಸಲಾಯಿತು. ಈ ಲೇಖನವು ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಹೇಗೆ ಪ್ರಭಾವ ಬೀರುತ್ತವೆ ಎಂಬುದನ್ನು ದತ್ತಾಂಶಗಳ ಆಧಾರದ ಮೇಲೆ ಶೇಕಡವಾರು ವಿವರಣೆ ಮೂಲಕ ವಿಶ್ಲೇಷಿಸುತ್ತದೆ

ಮಾಹಿತಿ ವಿಶ್ಲೇಷಣೆ

ಈ ಮೇಲೆ ತಿಳಿಸಿದ ಸಂಶೋಧನಾ ವಿಧಾನಗಳು, ತಂತ್ರಗಳು ಹಾಗೂ ವಿವಿಧ ಮೂಲಗಳಿಂದ ಸಂಗ್ರಹಿಸಿದ ಸಂಶೋಧನಾ ಮಾಹಿತಿಯನ್ನು ಪರಿಮಾಣಾತ್ಮಕ ಹಾಗೂ ಗುಣಾತ್ಮಕ ವಿಧಾನದಿಂದ ವಿಶ್ಲೇಷಿಸಿ, ಸಂಕೇತೀಕರಣ, ಪರಿಷ್ಕರಣೆ,

ವರ್ಗೀಕರಣ ಹಾಗೂ ಸೂಚೀಕರಣದ ಮೂಲಕ ಹಾಗೂ ಅಗತ್ಯವಿದ್ದಷ್ಟು ಸಂಖ್ಯಾಶಾಸ್ತ್ರೀಯ ವಿಧಾನಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಮಾಹಿತಿಯನ್ನು ವಿಶ್ಲೇಷಿಸಿ ವರದಿಯನ್ನು ತಯಾರಿಸಲಾಗಿದೆ.

ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮೇಲೆ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಪ್ರಭಾವ

ಕ್ರ.ಸಂ	ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು	ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ (N=60ಶೇಕಡಾ ಸಂಖ್ಯೆಗಳು)
1	ವ್ಯೆಯಕ್ತಿಕ ಮಾರ್ಗದರ್ಶನ	85%
2	ಫೀಡ್ಬ್ಯಾಕ್ ಮತ್ತು ಮಾರ್ಗಸೂಚಿ	78%
3	ಸಕಾರಾತ್ಮಕ ಬೋಧನೆಯ ಶೈಲಿ	82%
4	ಶೈಕ್ಷಣಿಕ ಆಕಾಂಕ್ಷೆಗಳನ್ನು ನಿರ್ಮಿಸುವ ಸಲಹೆ	75%
5	ನಿರಂತರ ಸ್ಮರಣೆ ಮತ್ತು ಪ್ರೋತ್ಸಾಹ	80%
6	ವ್ಯೆಯಕ್ತಿಕ ಶ್ರದ್ಧೆ ಮತ್ತು ಬೆಂಬಲ	88%
7	ಪ್ರಾಯೋಗಿಕ ಜ್ಞಾನ ಮತ್ತು ಪಠ್ಯ ಹೊರಗಿನ ಚಟುವಟಿಕೆಗಳು	72%

ಈ ಮೇಲಿನ ಕೋಷ್ಟಕದಲ್ಲಿ 'ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಮೇಲೆ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳ ಪ್ರಭಾವ' ವಿವರವನ್ನು ನೀಡಲಾಗಿದೆ. ವ್ಯೆಯಕ್ತಿಕ ಮಾರ್ಗದರ್ಶನ ದತ್ತಾಂಶದ ಪ್ರಕಾರ, 85% ವಿದ್ಯಾರ್ಥಿಗಳು ವ್ಯೆಯಕ್ತಿಕ ಮಾರ್ಗದರ್ಶನದಿಂದ ಉತ್ತಮ ಸಾಧನೆ ಮಾಡಿದರೆಂದು ತೋರಿಸಿತು. ಇದು ಬೋಧಕರು ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಗುರಿಗಳನ್ನು ಸಮರ್ಥವಾಗಿ ನಿರ್ವಹಿಸುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಯಲು ಪ್ರೇರಣಾ ತಂತ್ರಗಳನ್ನು ಬಳಸಿದಾಗ ಪರಿಣಾಮಕಾರಿಯಾಗುತ್ತದೆ. ಫೀಡ್ಬ್ಯಾಕ್ ಮತ್ತು ಮಾರ್ಗಸೂಚಿ ನೀಡಿದ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ 78% ಶೈಕ್ಷಣಿಕ ಸಾಧನೆ ಸುಧಾರಿಸಿತು. ನಿರಂತರ ಫೀಡ್ಬ್ಯಾಕ್ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ತಮ್ಮ ದೋಷಗಳನ್ನು ತಿದ್ದುಕೊಂಡು ಮುಂದಿನ ಹಂತಗಳಲ್ಲಿ ಉತ್ತಮ ನಿರ್ವಹಣೆಗೆ ಸಹಕಾರಿಯಾಗಿದೆ. ಸಕಾರಾತ್ಮಕ ಬೋಧನೆಯ ಶೈಲಿ 82% ವಿದ್ಯಾರ್ಥಿಗಳು ಸಕಾರಾತ್ಮಕ ಶೈಕ್ಷಣಿಕ ತಂತ್ರಗಳಿಂದ ಪ್ರೇರಣೆಯಾಗಿ ಉತ್ತಮ ಸಾಧನೆ ಮಾಡಿದ್ದಾರೆ. ಬೋಧಕರ ವೃತ್ತಿಜೀವನವು ಕೇವಲ ಪಾಠದ ಮಾತುಗಳಲ್ಲದೆ, ಧ್ಯೆರ್ಯ ಮತ್ತು ಪ್ರೋತ್ಸಾಹ ನೀಡುವುದನ್ನು ಕೂಡ ಒಳಗೊಂಡಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಪ್ರಮುಖ ಪ್ರಭಾವ ಬೀರುವ ತಂತ್ರವೆಂದರೆ ವ್ಯೆಯಕ್ತಿಕ ಶ್ರದ್ಧೆ ಮತ್ತು ಬೆಂಬಲ. ದತ್ತಾಂಶವು ತೋರಿಸುತ್ತದಂತೆ 88% ವಿದ್ಯಾರ್ಥಿಗಳು ಇದರಿಂದ ಶೈಕ್ಷಣಿಕ ಉನ್ನತಿಗೇರಿದ್ದಾರೆ. 72% ವಿದ್ಯಾರ್ಥಿಗಳು ಪ್ರಾಯೋಗಿಕ ಜ್ಞಾನ ಮತ್ತು ಪಠ್ಯ ಹೊರಗಿನ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಭಾಗವಹಿಸುವ ಮೂಲಕ ಶೈಕ್ಷಣಿಕವಾಗಿ ಉನ್ನತಿಯನ್ನು ಸಾಧಿಸಿದ್ದಾರೆ. ಬೋಧಕರು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪಠ್ಯಾಚಾರದ ಹೊರಗಿನ ಚಟುವಟಿಕೆಗಳಲ್ಲಿ ಮುಂದುಬರುವುದು ಮತ್ತು ತಮ್ಮ ಜ್ಞಾನವನ್ನು ವಿಸ್ತರಿಸಲು ಪ್ರೇರೇಪಿಸಿದಾಗ, ಅವರು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯಲ್ಲಿ ವಿಶೇಷ ಸುಧಾರಣೆ ಮಾಡುತ್ತಾರೆ. ಪಠ್ಯಾಚಾರದ ಹೊರಗಿನ ಚಟುವಟಿಕೆಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸಮಗ್ರ ಅಭಿವೃದ್ಧಿಯನ್ನು ಒದಗಿಸುತ್ತವೆ, ಇದರಿಂದ ಅವರು ತಮ್ಮ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯಲ್ಲಿ ಹೆಚ್ಚು ಮುಂದು ಬರುವ ಸಾಧ್ಯತೆ ಇರುತ್ತದೆ. ಈ ಸಂಶೋಧನಾತ್ಮಕ ಅಧ್ಯಯನದ ಪ್ರಮುಖ ಅಂತಿಮ ನಿರ್ಣಯವೆಂದರೆ, ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಮಹತ್ವದ ಪ್ರಭಾವವನ್ನು ಹೊಂದಿವೆ. ವ್ಯೆಯಕ್ತಿಕ ಮಾರ್ಗದರ್ಶನ, ಸಕಾರಾತ್ಮಕ ಶೈಕ್ಷಣಿಕ ಪ್ರೇರಣೆ, ಮತ್ತು ನಿರಂತರ ಬೆಂಬಲವೇ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಯಶಸ್ಸಿನಲ್ಲಿ ಪ್ರಮುಖ ಪಾತ್ರವಹಿಸುತ್ತವೆ.

ತೀರ್ಮಾನ: ಬಿ.ಇಡಿ ಶಿಕ್ಷಣದಲ್ಲಿ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಅತ್ಯಂತ ಪ್ರಮುಖವಾಗಿದ್ದು, ಅದು ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಮತ್ತು ವೃತ್ತಿಪರ ಬೆಳವಣಿಗೆಯ ಮೇಲೆ ಶೇಕಡವಾರು ಶ್ರೇಯೋಭಿವೃದ್ಧಿ ಒದಗಿಸುತ್ತವೆ.

ಸಂಶೋಧನಾತ್ಮಕ ಫಲಿತಾಂಶಗಳು:

- ಸಂಶೋಧನೆಯಿಂದ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗೆ ಹೆಚ್ಚಿನ ಪ್ರಭಾವ ಬೀರುವುದನ್ನು ಸೂಚಿಸಲಾಗಿದೆ.

- ಸಕಾರಾತ್ಮಕ ಪ್ರತಿಕ್ರಿಯೆ: ಬೋಧಕರು ನೀಡುವ ಪ್ರೋತ್ಸಾಹಕ ಮಾತುಗಳು ಮತ್ತು ಸಕಾರಾತ್ಮಕ ಪ್ರತಿಕ್ರಿಯೆಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಆತ್ಮವಿಶ್ವಾಸವನ್ನು ಹೆಚ್ಚಿಸುತ್ತವೆ.

- ವೈಯಕ್ತಿಕ ಬೆಂಬಲ: ಬೋಧಕರು ನೀಡುವ ವೈಯಕ್ತಿಕ ಮತ್ತು ತಾಂತ್ರಿಕ ಬೆಂಬಲವು ಶೈಕ್ಷಣಿಕ ಪ್ರಯತ್ನಗಳಲ್ಲಿ ಅವರ ಪ್ರಗತಿಯನ್ನು ಸುಧಾರಿಸುತ್ತದೆ.

- ಗುಂಪು ಚಟುವಟಿಕೆಗಳು: ಗುಂಪಿನಲ್ಲಿ ಕಲಿಸುವ ಕೌಶಲ್ಯಗಳು ಮತ್ತು ಸಾಮೂಹಿಕ ಕಾರ್ಯಾಚರಣೆ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಹೆಚ್ಚು ಸ್ಪಷ್ಟ ಶ್ರದ್ಧೆಯನ್ನು ಬೆಳೆಸುತ್ತವೆ.

- ತಂತ್ರಜ್ಞಾನ ಬಳಕೆ: ತಂತ್ರಜ್ಞಾನ ಆಧಾರಿತ ಪಾಠಗಳು ಮತ್ತು ಉಪಾಯಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪಾಠವನ್ನು ಹೆಚ್ಚು ಪ್ರಾಯೋಗಿಕವಾಗಿ ಮತ್ತು ಆಕರ್ಷಕವಾಗಿ ಮಾಡುತ್ತದೆ.

ಶೈಕ್ಷಣಿಕ ನಿಹಿತಾರ್ಥಗಳು:

- ಬೋಧಕರು ಬಳಸುವ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಬೆಳವಣಿಗೆಯಲ್ಲಿ ಮತ್ತು ಸಾಧನೆಯಲ್ಲಿ ನೇರ ಮತ್ತು ಸಕಾರಾತ್ಮಕ ಪ್ರಭಾವವನ್ನು ಹೊಂದಿವೆ.

- ಬೋಧಕರಿಂದ ಲಭ್ಯವಿರುವ ವೈಯಕ್ತಿಕ ಬೆಂಬಲ ಮತ್ತು ಮಾರ್ಗದರ್ಶನವು ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ಉತ್ತೇಜಿಸುವ ಪ್ರಮುಖ ಅಂಶವಾಗಿದೆ.

- ಬೋಧಕರ ಪ್ರೇರಣಾ ಶೈಲಿಗಳು, ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಉತ್ಸಾಹದೊಂದಿಗೆ ಕಲಿಸುವ ಮನೋವಿಕಾಸವನ್ನು ಉತ್ತೇಜಿಸುವ ಸಾಮರ್ಥ್ಯ ಹೊಂದಿವೆ.

ಉಪಸಂಹಾರ:

ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗಾಗಿ ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಅತ್ಯಂತ ಮುಖ್ಯವಾಗಿದೆ. ಸಕಾರಾತ್ಮಕ ಮತ್ತು ನಿರ್ಮಾಣಾತ್ಮಕ ಪ್ರೇರಣೆಯ ಮೂಲಕ ಬೋಧಕರು, ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಕಲಿಕೆಯ ಹಂಬಲವನ್ನು ಉತ್ತೇಜಿಸುವುದರಿಂದ ಅವರು ಉತ್ತಮ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಗಳನ್ನು ತೋರಿಸುತ್ತಾರೆ. ಆದ್ದರಿಂದ, ಬೋಧಕರ ಪ್ರೇರಣಾ ಶೈಲಿ ಮತ್ತು ತಂತ್ರಗಳನ್ನು ಸಮರ್ಥವಾಗಿ ಬಳಸಿದರೆ, ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳು ಶೈಕ್ಷಣಿಕವಾಗಿ ಮತ್ತು ವೃತ್ತಿಪರವಾಗಿ ಹೆಚ್ಚು ಪ್ರಗತಿಸಬಹುದು. ಬೋಧಕರ ಪ್ರೇರಣಾ ತಂತ್ರಗಳು ಬಿ.ಇಡಿ ವಿದ್ಯಾರ್ಥಿಗಳ ಶೈಕ್ಷಣಿಕ ಸಾಧನೆಯನ್ನು ಹೆಚ್ಚಿಸುವಲ್ಲಿ ಪ್ರಮುಖವಾಗಿ ಕಾರ್ಯನಿರ್ವಹಿಸುತ್ತದೆ. ಉತ್ತಮ ಬೋಧಕರು ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಕೇವಲ ಪಾಠ ಕಲಿಸುವುದಲ್ಲ, ಅವರಿಗೆ ಶ್ರದ್ಧೆ, ಉತ್ಸಾಹ, ಮತ್ತು ಶೈಕ್ಷಣಿಕ ದೃಷ್ಟಿಕೋನವನ್ನು ನೀಡಿ, ಅವರನ್ನು ಶ್ರೇಷ್ಠತೆಯ ದಾರಿಯಲ್ಲಿ ಮುನ್ನಡೆಸುತ್ತಾರೆ. ಈ ಪ್ರೇರಣಾ ಶಕ್ತಿಯು ವಿದ್ಯಾರ್ಥಿಗಳ ದೀರ್ಘಕಾಲಿಕ ಶೈಕ್ಷಣಿಕ ಯಶಸ್ಸಿಗೆ ದಾರಿಯಾಗುತ್ತದೆ.

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ದ್ವಿತೀಯ ಪಿಯು ವಿದ್ಯಾರ್ಥಿಗಳ ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಗೆ ಸಂಬಂಧಿಸಿದಂತೆ ವೃತ್ತಿಪರ ಮನೋಭಾವ, ವೃತ್ತಿಪರ ಅಭಿವೃತ್ತಿ ಮತ್ತು ವೃತ್ತಿಪರ ಆಸಕ್ತಿ ಕುರಿತು ಅಧ್ಯಯನ

ಡಾ. ಜಾನಕಿ ಎಮ್

ಸಂಶೋಧನಾ ಮಾರ್ಗದರ್ಶಕರು, ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಶಿಕ್ಷಣಶಾಸ್ತ್ರ ಅಧ್ಯಯನ ಮತ್ತು ಸಂಶೋಧನಾ ವಿಭಾಗ, ಕರ್ನಾಟಕ ರಾಜ್ಯ ಮುಕ್ತ ವಿಶ್ವವಿದ್ಯಾನಿಲಯ, ಮುಕ್ತಗಂಗೋತ್ರಿ, ಮೈಸೂರು.

ಕೆ. ಎಮ್. ಯೋಗೀಶ್

ಸಂಶೋಧನಾ ವಿದ್ಯಾರ್ಥಿ, ಸಹಾಯಕ ಪ್ರಾಧ್ಯಾಪಕರು, ಜೆಎಸ್ಎಸ್ ಬಿ.ಇಡಿ ಕಾಲೇಜು, ಚಾಮರಾಜನಗರ.

Abstract

ಒಂದು ದೇಶದ ಅಭಿವೃದ್ಧಿಯಲ್ಲಿ ಶಿಕ್ಷಣದ ಪಾತ್ರ ಬಹು ದೊಡ್ಡದಾಗಿದೆ. ಉತ್ತಮವಾದ ಗುಣಮಟ್ಟದ ಶಿಕ್ಷಣವನ್ನು ನೀಡಿದರೆ ದೇಶದ ಅಭಿವೃದ್ಧಿ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳ ಭವಿಷ್ಯದ ಅಭಿವೃದ್ಧಿ ಸಾಧ್ಯ ಹಾಗೂ ಅವರ ಅಧ್ಯಯನದಲ್ಲಿ ಕೌಶಲ್ಯ ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಅಳವಡಿಕೆ ಮಾಡಿ ಶಿಕ್ಷಣವನ್ನು ನೀಡುವುದರಿಂದ ಅವರುಗಳ ಭವಿಷ್ಯ ಉತ್ತಮವಾಗುತ್ತದೆ ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳು ಅವರ ಮುಂದಿನ ಜೀವನವನ್ನು ರೂಪಿಸಿಕೊಳ್ಳಲು ಅವಕಾಶ ನೀಡಿದಂತಾಗುತ್ತದೆ. ಆದುದರಿಂದ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು ಅತಿ ಮುಖ್ಯವಾದವುಗಳಾಗಿವೆ. ಪದವಿ ಪೂರ್ವ ಶಿಕ್ಷಣದ ಅಧ್ಯಯನದಲ್ಲಿರುವ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಪದವಿ ಪೂರ್ವ ಶಿಕ್ಷಣದ ನಂತರ ಅವರ ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆ ಮಾಡುವಲ್ಲಿ ಅತ್ಯಂತ ಮಹತ್ತದ ಪಾತ್ರವನ್ನು ವಹಿಸುತ್ತದೆ ಆದುದರಿಂದ ಈ ಹಂತದಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಅವರ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು ಅತಿ ಮುಖ್ಯವಾಗಿರುತ್ತದೆ. ಭವಿಷ್ಯದಲ್ಲಿ ವೃತ್ತಿಯ ಆಯ್ಕೆಯು ಕೂಡ ಒಂದು ಸವಾಲಾಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳು ತಾವು ಅಧ್ಯಾಯ ಮಾಡುತ್ತಿರುವಾಗಲೇ, ಅವರ ಮುಂದಿನ ಉದ್ಯೋಗಗಳ ಆಯ್ಕೆಗಳ ಬಗ್ಗೆ ಚಿಂತನೆಗಳನ್ನು ರೂಪಿಸಿಕೊಳ್ಳಲು ಮತ್ತು ಆಯ್ಕೆಯ ಸಂದರ್ಭದಲ್ಲಿ ಉತ್ತಮವಾದ ಉದ್ಯೋಗಗಳ ಆಯ್ಕೆಗೆ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು ಪ್ರಭಾವವನ್ನು ಬೀರುತ್ತವೆ. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಈ ಹಂತದಲ್ಲಿ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಬೆಳೆಸುವುದು ಅತ್ಯಂತ ಅವಶ್ಯಕವಾಗಿದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಹತ್ತು ಹಲವು ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಅವರಲ್ಲಿ ಬೆಳೆಸಬವುದಾಗಿದೆ. ಅವುಗಳೆಂದರೆ ವಿಮರ್ಶಾತ್ಮಕ ಚಿಂತನೆ: ಭವಿಷ್ಯದ ಕೆಲಸದ ಮೂಲಭೂತ ಕೌಶಲವಾಗಿದೆ, ಸಂವಹನ: ಭವಿಷ್ಯದ ಹಾದಿಯಲ್ಲಿ ಸಂವಹನವು ಪರಿಣಾಮಕಾರಿಯಾಗಿದೆ, ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತೆ: ಉದ್ಯೋಗ ಆಯ್ಕೆಯಲ್ಲಿ ಪ್ರಮುಕವಾಗಿದೆ. ಸೃಜನಶೀಲತೆ ಮತ್ತು ನಾವಿನ್ಯತೆಯು ಸ್ಪರ್ಧಾತ್ಮಕ ಚಿಂತನೆ ಮಾಡಿಸುತ್ತದೆ, ಭಾವನಾತ್ಮಕ ಬುದ್ಧಿವಂತಿಕೆಯ ಭವಿಷ್ಯದ ನಿರ್ವಹಣೆಯನ್ನು ತಿಳಿಸಿಕೊಡುತ್ತದೆ. ತಂತ್ರಜ್ಞಾನ: ಜೀವನದ ಅವಿಭಾಜ್ಯ ಅಂಗವಾಗಿದೆ ಭವಿಷ್ಯವನ್ನು ರೂಪಿಸಲು ಅನುಕೂಲವಾಗಿದೆ, ಹೊಂದಾಣಿಕೆಯ ಚಿಂತನೆ: ಭವಿಷ್ಯದಲ್ಲಿ ಹೊಂದಾಣಿಕೆಯ ಅತ್ಯಂತ ಪ್ರಮುಖವಾದುದು, ಪೌರತ್ವ: ಭವಿಷ್ಯದ ದಾರಿದೀಪವಾಗಿದೆ. ಸಾಂಸ್ಕೃತಿಕ ಅರಿವು: ಭವಿಷ್ಯದಲ್ಲಿ ಜಾಗ್ರತೆಯನ್ನು ಬೆಳೆಸುತ್ತದೆ. ಹೊಂದಿಕೊಳ್ಳುವಿಕೆ: ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಆತ್ಮವಿಶ್ವಾಸವನ್ನು ಮೂಡಿಸುತ್ತದೆ. ಸಕ್ರಿಯೇ ಕಲಿಕೆ: ಭವಿಷ್ಯದಲ್ಲಿ ಉತ್ತಮ ಮಾರ್ಗವನ್ನು ಪಡೆಯಬುದು. ಈ ಮೇಲಿನವುಗಳಲ್ಲದೆ ಇನ್ನೂ ಹತ್ತು ಹಲವಾರು ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು ವಿದ್ಯಾರ್ಥಿಗಳ ಭವಿಷ್ಯವನ್ನು ರೂಪಿಸುತ್ತದೆ, ಆದುದರಿಂದಾಗಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಈ ಹಂತದಲ್ಲಿ ಅವರ ಭವಿಷ್ಯವನ್ನು ಉತ್ತಮಪಡಿಸಲು ಮತ್ತು ಅಳವಡಿಸಿಕೊಳ್ಳಲು ಉತ್ತಮವಾದ ಅವಕಾಶಗಳನ್ನು ಮಾಡಿಕೊಡುವುದು ಒಂದು ವ್ಯವಸ್ಥೆಯ ಬಹು ಮುಖ್ಯ ಕಾರ್ಯವಾಗಿದೆ ಎಂದು ಹೇಳಬುದಾಗಿದೆ. ಈ ಅಧ್ಯಯನದಿಂದ ದ್ವಿತೀಯ ಪಿಯು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಇರುವ ಮನೋಭಾವ, ಮನೋವೃತ್ತಿ ಮತ್ತು ಆಸಕ್ತಿಯನ್ನು ಕುರಿತು ಅಧ್ಯಯನ ಮಾಡುವುದೆ ಈ ಅಧ್ಯಯನದ ಮಹತ್ತವಾಗಿದೆ.

ಪೀಠಿಕೆ

ಶಿಕ್ಷಣವು ವಿದ್ಯಾರ್ಥಿಗಳ ಜೀವನದಲ್ಲಿ ಅವರ ಭವಿಷ್ಯದ ಅವಿಭಾಜ್ಯ ಅಂಗವಾಗಿದೆ. ಉತ್ತಮ ಶಿಕ್ಷಣದಿಂದ ಮಾತ್ರ ಉತ್ತಮ ಭವಿಷ್ಯ ಸಾಧ್ಯ, ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ವಿದ್ಯಾರ್ಥಿ ಜೀವನದಲ್ಲಿ ತಮ್ಮ ತಮ್ಮ ಮುಂದಿನ ಭವಿಷ್ಯದ ಕನಸುಗಳನ್ನು ನನಸು ಮಾಡಿಕೊಳ್ಳಲು ಅವರಿಗೆ ಉತ್ತಮವಾದ ಶಿಕ್ಷಣವನ್ನು ಒದಗಿಸಬೇಕಾಗಿದೆ, ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಶಿಕ್ಷಣವು ಭವಿಷ್ಯದ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಬೆಳೆಸುವಂತಾಗಬೇಕು ಏಕೆಂದರೆ 'ಶಿಕ್ಷಣ ಬದುಕಿಗಾಗಿ' ವಿದ್ಯಾರ್ಥಿಗಳ ಜೀವನ ಉಜ್ಜಲವಾಗಿರಬೇಕಾದರೆ ಅವರಿಗೆ ಕೌಶಲ ಹಾಗೂ ಸಾಮರ್ಥ್ಯ ಆದಾರಿತ ಶಿಕ್ಷಣ ಸಿಗಬೇಕಾಗಿದೆ ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಭವಿಷ್ಯದ ಹಿತದೃಷ್ಟಿಯಿಂದ ಉತ್ತಮ ಕೌಶಲ ಮತ್ತು ಸಾಮರ್ಥ್ಯ ಆದಾರಿತ ಶಿಕ್ಷಣವನ್ನು ದೊರಕುವಂತೆ ಮಾಡುವುದು ಒಂದು ವ್ಯವಸ್ಥೆಯ ಕಾರ್ಯವಾಗಿದೆ.

ಅರ್ಥ

ಭವಿಷ್ಯದ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಉದ್ಯೇಣಟಜಜಿಟಿಜಜ○ೀಗವಕಾಶಗಳ ವಿಸ್ತರಣೆಯಾಗಿದೆ ಬದಲಾಗುತ್ತಿರುವ ತಂತ್ರಜ್ಞಾನಗಳೊಂದಿಗೆ ಅಗತ್ಯವಿರುವ ಕೌಶಲಗ ಹಾಗೂ ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಗಳಿಸಿಕೊಳ್ಳುವುದಾಗಿದೆ.

ಅಗತ್ಯ ಮತ್ತು ಮಹತ್ವ

ಪ್ರಸ್ತುತ ದಿನಗಳಲ್ಲಿ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಭವಿಷ್ಯದ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಬೆಳೆಸುವ ಕಾರ್ಯವು ಅತ್ಯಂತ ಪ್ರಾಮುಖ್ಯತೆಯನ್ನು ಪಡೆದುಕೊಂಡಿದೆ, ಇದು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಅವರ ಮುಂದಿನ ಭವಿಷ್ಯದ ಬಗ್ಗೆ ಚಿಂತನೆ ಮಾಡಿ ರೂಪಿಸಿಕೊಳ್ಳಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುತ್ತದೆ. ಈ ನಿಟ್ಟಿನಲ್ಲಿ ಪದವಿ ಪೂರ್ವ ಹಂತದ ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಮುಂದಿನ ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಇದು ಪರಿಣಾಮವನ್ನು ಬೀರುತ್ತದೆ. ಏಕೆಂದರೆ ಈ ಹಂತವು ಅವರ ಮುಂದಿನ ಜೀವನದ ತಿರುವು ಆದುದರಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಉತ್ತಮವಾದ ಆಯ್ಕೆಯ ನಿರ್ಧಾರಗಳನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳಲು ಅವರಿಗೆ ಸೂಕ್ತವಾದ ಅವಕಾಶಗಳ ಜೊತೆಗೆ ಆಯ್ಕೆಗಳಿಗೆ ಬೇಕಾಗಿರುವ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ರೂಪಿಸುವುದಾಗಿದೆ, ಮತ್ತು ವಿದ್ಯಾರ್ಥಿಗಳನ್ನು ಹೆಚ್ಚಿನ ಅವಕಾಶಗಳು ಬಂದಂತಹ ಸಂದರ್ಭದಲ್ಲಿ ಸೂಕ್ತವಾದುದ್ದನ್ನು ಹೇಗೆ ಆಯ್ಕೆ ಮಾಡಿಕೊಳ್ಳಬೇಕು ಯಾವುದನ್ನು ಆಯ್ಕೆ ಮಾಡಿದರೆ ಉತ್ತಮ ಎಂಬ ಮನೋವೃತ್ತಿ, ಆಸಕ್ತಿ, ಮನೋಭಾವಗಳ ಜೊತೆಗೆ ಪ್ರಸ್ತುತ ಸ್ಪರ್ಧಾತ್ಮಕ ತಿಳುವಳಿಕೆಗಳನ್ನು ಬೆಳೆಸುವುದು ಈ ಅಧ್ಯಯನದ ಅಗತ್ಯ ಮತ್ತು ಮಹತ್ವವಾಗಿದೆ.

ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಭವಿಷ್ಯದ ಕೌಶಲ್ಯಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು

- ವಿಮರ್ಶಾತ್ಮಕ ಚಿಂತನೆ : ಈ ಕೌಶಲಗಳನ್ನು ಈ ಹಂತದಲ್ಲಿ ಬೆಳೆಸುವುದು ಅತ್ಯಗತ್ಯವಾಗಿದೆ. ವಿಮರ್ಶಾತ್ಮಕ ಚಿಂತನೆಯ ಉದ್ಯೋಗಿಗಳಿಗೆ ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಬರುವಂತಹ ಸಂಕೀರ್ಣ ಸಮಸ್ಯೆಗಳನ್ನು ಪರಿಹರಿಸಲು ಆದಾರವಾಗಿದೆ, ಆದುದರಿಂದ ವಿದ್ಯಾರ್ಥಿಗಳು ವಿಮರ್ಶಾತ್ಮಕ ಚಿಂತನೆ ಮತ್ತು ಆಲೋಚನೆಗಳನ್ನು ಭವಿಷ್ಯದ ಹಿತದೃಷ್ಟಿಯಿಂದ ಬೆಳೆಸಿಕೊಳ್ಳುವುದು ಪ್ರಮುಖವಾಗಿದೆ.

- ಸಂವಹನ : ಸಂವಹನ ಕೌಶಲದಲ್ಲಿ ಮೌಖಿಕ ಮತ್ತು ಲಿಖಿತ ಸಂವಹನವು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಮಾಹಿತಿ, ಭಾವನೆಗಳು ಮತ್ತು ಆಲೋಚನೆಗಳನ್ನು ಹಂಚಿಕೊಳ್ಳುವ ಅಥವಾ ವಿನಿಮಯ ಮಾಡಿಕೊಳ್ಳುವ ಕ್ರಿಯಾ ಸೂಚನೆಗಳಾಗಿವೆ ಇವುಗಳು ವಿದ್ಯಾರ್ಥಿಗಳು ಭವಿಷ್ಯದಲ್ಲಿ ಇತರರ ಜೊತೆ ಉತ್ತಮವಾದ ಸಂವಹನ ಮತ್ತು ಸಮನ್ವಯವನ್ನು ರೂಡಿಸಿಕೊಳ್ಳಬಹುದಾಗಿದೆ. ವೃತ್ತಿಯಲ್ಲಿ ಸಂವಹನವು ತನ್ನದೇ ಆದ ರೀತಿಯಲ್ಲಿ ಪ್ರಭಾವವನ್ನು ಬೀರುತ್ತದೆ.

- ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತೆ : ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತೆಯು ಒಂದು ಕೌಶಲ್ಯವಾಗಿದ್ದು ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಮತ್ತು ಭವಿಷ್ಯದ ಚಿಂತನೆಯಲ್ಲಿ ತಂತ್ರಜ್ಞಾನದ ಬುದ್ಧಿವಂತಿಕೆಯ ಅಳವಡಿಕೆಯಾಗಿದೆ ಇದು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಹೆಚ್ಚು ಆತ್ಮವಿಶ್ವಾಸವನ್ನು ಹೆಚ್ಚಿಸುತ್ತದೆ, ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಪ್ರಸ್ತುತ ಜ್ಞಾನವನ್ನು ಪಡೆದುಕೊಳ್ಳಲು ಮತ್ತು ಸ್ಪರ್ಧಾತ್ಮಕ ಜಗತ್ತಿನ ಬಗ್ಗೆ ತಿಳಿದುಕೊಳ್ಳಲು ಅತಿ ಮುಖ್ಯವಾಗಿದೆ.

- ಸೃಜನಶೀಲತೆ ಮತ್ತು ನಾವಿನ್ಯತೆ: ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಸೃಜನಶೀಲತೆಯ ಕಲ್ಪನೆ ಮತ್ತು ನಾವಿನ್ಯತೆ, ಭವಿಷ್ಯದ ಪರಿಹಾರಗಳು, ಪ್ರಕ್ರಿಯೆಗಳು ಮತ್ತು ಉತ್ಪನ್ನಗಳನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಪ್ರಮುಖ ಕೌಶಲವಾಗಿದೆ ಮತ್ತು ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ವೈವಿಧ್ಯಮಯ ದೃಷ್ಟಿಕೋನಗಳನ್ನು ಮತ್ತು ವೃತ್ತಿಯಲ್ಲಿ ಕಾರ್ಯಕ್ಷಮತೆಯನ್ನು ಬೆಳೆಸಿಕೊಳ್ಳಲು ಸಹಕಾರಿಯಾಗಿದೆ.

- ಭಾವನಾತ್ಮಕ ಬುದ್ಧಿವಂತಿಕೆ: ಭಾವನಾತ್ಮಕ ಬುದ್ಧಿವಂತಿಕೆಯ ಕೌಶಲವು ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ತಮ್ಮಲ್ಲಿ ಮತ್ತು ಇತರರಲ್ಲಿ ಭಾವನೆಗಳನ್ನು ಅರ್ಥ ಮಾಡಿಕೊಳ್ಳುವ ವ್ಯಕ್ತಪಡಿಸುವ ಹಾಗೂ ನಿರ್ವಹಿಸುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಸುತ್ತದೆ ಇದು ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಜಾಗತಿಕ ಮಟ್ಟದಲ್ಲಿ ಪ್ರಭಾವವನ್ನು ಬೀರುತ್ತದೆ ಆದುದರಿಂದ ಈ ಹಂತದಲ್ಲಿ ಕೌಶಲವನ್ನು ಬೆಳೆಸುವುದು ಶಿಕ್ಷಣದ ಅತಿ ಮುಖ್ಯವಾದ ಕಾರ್ಯವಾಗಿದೆ.

- ಹೊಂದಾಣಿಕೆ ಚಿಂತನೆ: ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಹೊಂದಾಣಿಕೆ ಮತ್ತು ಕಲಿಯುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಸುವುದಾದ ಪ್ರಮುಖ ಕೌಶಲವಾಗಿದೆ ಬದಲಾವಣೆಯು ಭವಿಷ್ಯದ ಕೆಲಸದ ಮೇಲೆ ಹಾಗೂ ಆಯ್ಕೆಯಲ್ಲಿ ಪ್ರಭಾವವನ್ನು ಬೀರುತ್ತದೆ, ಬದಲಾಗುತ್ತಿರುವ ಪರಿಸ್ಥಿತಿಗಳಿಗೆ ಅನುಗುಣವಾಗಿ ಹೊಂದಿಕೊಳ್ಳುವ ಮತ್ತು ವಿಕಸಗೊಳ್ಳುವ ಸಾಮರ್ಥ್ಯವನ್ನು ಭವಿಷ್ಯದಲ್ಲಿ ಅಭಿವೃದ್ಧಿಪಡಿಸಲು ಸಹಕಾರಿಯಾಗಿದೆ.

- ಸಮಸ್ಯೆ ಪರಿಹಾರ : ಸಮಸ್ಯೆ ಪರಿಹಾರವು ಭವಿಷ್ಯದಲ್ಲಿ ಒಂದು ಸಂಕೀರ್ಣ ಕೌಶಲ್ಯವಾಗಿದೆ. ಇದು ವಿಮರ್ಶಾತ್ಮಕ ಚಿಂತನೆ, ನಿರ್ಧಾರ ತೆಗೆದುಕೊಳ್ಳುವುದು, ಸೃಜನಶೀಲತೆ ಮತ್ತು ಮಾಹಿತಿ ಸಂಸ್ಕರಣೆಯನ್ನು ಒಳಗೊಂಡಿರುತ್ತದೆ, ಹಾಗೂ ಸಮಸ್ಯೆಯ ಕಾರಣವನ್ನು ನಿರ್ಧರಿಸುವುದು ಸಮಸ್ಯೆಗಳಿಗೆ ಪರಿಹಾರವನ್ನು ಕಂಡುಕೊಳ್ಳುವುದಾಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ ಔದ್ಯೋಗಿಕ ಆಯ್ಕೆಯಲ್ಲಿ ಉಂಟಾಗುವ ಸಮಸ್ಯೆಗಳನ್ನು ತಾವು ಸ್ವತಃ ಪರಿಹರಿಸಿಕೊಳ್ಳುವ ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಬೆಳೆಸಬವುದಾಗಿದೆ.

- **ಸಕ್ರಿಯ ಕಲಿಕೆ:** ಸಕ್ರಿಯ ಕಲಿಕೆಯು ಕಲಿಯಲು ಪ್ರಯತ್ನಿಸುತ್ತಿರುವ ವ್ಯಕ್ತಿಗಳಲ್ಲಿ ಸಂಪೂರ್ಣವಾಗಿ ತೊಡಗಿಸಿಕೊಳ್ಳುವಿಕೆಯಾಗಿದೆ ಇದು ಜೀವನ ಪಯರ್ಂತ ಕಲಿಕೆಯಲ್ಲಿ ಅಥವಾ ಉದ್ಯೋಗದಲ್ಲಿ ಬರುವಂತಹ ಹೊಸ ತಂತ್ರಗಳು, ಕೌಶಲಗಳ ಬಗ್ಗೆ ತಿಳಿದು ಕಲಿಕೆ ಮತ್ತು ಉದ್ಯೋಗಗಳಲ್ಲಿ ಹೆಚ್ಚಿನ ಪ್ರಗತಿಯನ್ನು ಸಾಧಿಸುವುದಾಗಿದೆ.

- **ನಿರ್ಧಾರಗಳ ಆಯ್ಕೆ:** ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ಭವಿಷ್ಯದ ನಿರ್ಧಾರಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳುವಿಕೆ, ವೈಯಕ್ತಿಕ ಕೌಶಲ, ಹಾಗೂ ವಿದ್ಯಾರ್ಥಿಯ ಜೀವನದಲ್ಲಿ ದಿನನಿತ್ಯದ ಸಂಭವಿಸುವ ಸಮಸ್ಯೆಗಳನ್ನು ತಿಳಿದು ಸೂಕ್ತವಾದ ನಿರ್ಧಾರಗಳನ್ನು ತೆಗೆದುಕೊಳ್ಳಲು ಉಪಯುಕ್ತವಾಗಿದೆ. ಒಂದು ನಿರ್ಧಿಷ್ಟ ಸಮಯದಲ್ಲಿ ಹಲವಾರು ಸಂಭಾವ್ಯ ಆಯ್ಕೆಗಳಲ್ಲಿ ಯಾವುದು ಉತ್ತಮವಾಗಿದೆ ಎಂಬುದರ ಕುರಿತು ಆಯ್ಕೆಮಾಡುವುದು ನಿರ್ಧಾರ.

- **ಜಾಗತಿಕ ಜಾಗೃತಿ:** ವಿದ್ಯಾರ್ಥಿಗಳಲ್ಲಿ ಜಾಗತಿಕ ಜಾಗೃತಿಯನ್ನು ಬೆಳೆಸುವ ಮೂಲಕ ಅವರಲ್ಲಿ ವಿಶಾಲವಾದ ವಿಶ್ವ ದೃಷ್ಟಿಕೋನವನ್ನು ಅಭಿವೃದ್ಧಿಪಡಿಸಬಹುದು ಹಾಗೂ ಅವರಲ್ಲಿ ಜಾಗತಿಕ ಮಟ್ಟದ ಡಿಜಿಟಲ್ ಸಾಕ್ಷರತೆ ಮಾದ್ಯಮ ಸಾಕ್ಷರತೆ ಜಾಗತಿಕ ಜಾಗೃತಿ ಸ್ವಯಂ ಪ್ರೇರಣೆ ಮುಂತಾದವುಗಳಿಂದ ಅವನು ಜಾಗತಿಕ ಮಟ್ಟದ ನಾಗರೀಕರಾಗಲು ಅವಕಾಶ ಮಾಡಿಕೊಡುತ್ತದೆ.

- **ಪೌರತ್ವ:** ಪೌರತ್ವವು ಸಮಾಜದೊಂದಿಗೆ ವಿದ್ಯಾರ್ಥಿಗಳು/ ಮನುಷ್ಯ ರಚನಾತ್ಮಕವಾಗಿ ತೊಡಗಿಸಿಕೊಳ್ಳುವ ಮತ್ತು ಅದನ್ನು ಉಳಿಸಿಕೊಳ್ಳುವ ಪ್ರಕ್ರಿಯೆಗಳಲ್ಲಿ ಭಾಗವಹಿಸುವ ಸಾಮರ್ಥ್ಯವಾಗಿದೆ ವಿದ್ಯಾರ್ಥಿಗಳು ಉತ್ತಮವಾದ ಸಮಾಜದ ಪೌರರಾಗಲು ಸಹಾಯ ಮಾಡುತ್ತದೆ.

- **ತಂತ್ರಜ್ಞಾನ:** ತಂತ್ರಜ್ಞಾನ ಜೀವನದ ಅವಿಭಾಜ್ಯ ಅಂಗವಾಗಿದೆ ಮತ್ತು ಉತ್ತಮವಾದ ಭವಿಷ್ಯವನ್ನು ರೂಪಿಸಿಕೊಳ್ಳಲು ಬೇಕಾಗಿರುವ ಮೂಲಭೂತ ಅಂಶವಾಗಿದೆ. ವಿದ್ಯಾರ್ಥಿಗಳು ಸೃಜನಶೀಲರಾಗಲು, ಹೊಸಹೊಸ ಆಲೋಚನೆಗಳ ಬೆಳೆಸಿಕೊಳ್ಳು, ಭವಿಷ್ಯದ ಜೀವನಕ್ಕಾಗಿ ತಂತ್ರಜ್ಞಾನವನ್ನು ಅಳವಡಿಸಿಕೊಳ್ಳು ಸಹಕಾರಿಯಾಗಿದೆ.

ಉಪಸಂಹಾರ

ಭವಿಷ್ಯದ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳು ಪ್ರಸ್ತುತ ಸ್ಪರ್ಧಾತ್ಮಕ ಜಗತ್ತಿನಲ್ಲಿ ಅತ್ಯಂತ ಮುಖ್ಯವಾಗಿ ಬೇಕಾಗಿರುವುಗಳಾಗಿವೆ, ಇವುಗಳನ್ನು ವಿದ್ಯಾರ್ಥಿ ಜೀವನದಲ್ಲಿ ಬೆಳೆಸಿಕೊಳ್ಳುವುದರಿಂದ ಮುಂದಿನ ಭವಿಷ್ಯ ಉತ್ತಮವಾಗಿರುತ್ತದೆ. ವಿದ್ಯಾರ್ಥಿಗಳು ತಮ್ಮ ವೃತ್ತಿ ಬದುಕಿನ ಆಯ್ಕೆಯಲ್ಲಿ ಈ ರೀತಿಯ ಕೌಶಲಗಳು ಮತ್ತು ಸಾಮರ್ಥ್ಯಗಳನ್ನು ಪಡೆದುಕೊಳ್ಳುವುದರಿಂದ ಅವರ ಮುಂದಿನ ಭವಿಷ್ಯಕ್ಕೆ ಭದ್ರವಾದ ಬುನಾದಿಯನ್ನು ಹಾಕಿ ಕೊಟ್ಟಂತಾಗುತ್ತದೆ.

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