



DIGITAL DIVIDE AND CHALLENGES OF ACADEMIC ACHIEVEMENT

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Abstract

Even though the information and communication technology has developed a lot, the use of its advancement in the field of education was not much popular among the students in India, especially at school level. Fortunately, Covid-19 has opened the doors of online education to all school-going children in our country irrespective of their locality, socioeconomic status or any other thing. But the bitter reality is that the digital divide in our country is very much wide. Even after reopening the educational institutions, it's expected that the online education won't be a closed chapter forever. The terms like blended learning and hybrid learning are becoming more familiar to the entire academia. Online education is electronically supported learning that relies on the internet for teacher/student interaction and the distribution of class materials. It's a concept known in different terms like computer-based training, web-based training, internet based training, online training, e-learning (electronic learning), m-learning (mobile learning) and computer-aided distance education. At the same time, the access to the internet for the students of India stands as a big question mark in front of the stakeholders. Digital divide is a major threat for our students in achieving academic success. In this paper, A humble attempt is made to explore the challenges caused by digital divide and the ways to overcome them to ensure the academic achievement of the students. Multifaceted problems faced by the stakeholders like teachers, students, parents and administrators and their possible solutions are discussed in this paper.

Key words: Digital Divide, Academic Achievement

INTRODUCTION

Everything, it is stated, has a positive and negative aspect. Even the pandemic Covid-19 has proven to be no exception to this rule. We all know that Covid-19 has wreaked havoc on the universe as a whole. It has had a negative impact on human beings and other living things on earth. It has resulted in significant losses in all areas, including the economy and education. Given all of these unvarnished facts, we can conclude that Covid-19 has produced

some favourable outcomes. They are mostly in the field of education. Despite the fact that information and communication technology has advanced significantly, its application in the field of education has remained largely unpopular with Indian students, particularly at the school level. Fortunately, Covid-19 has opened the doors to new possibilities.

Fortunately, Covid-19 has made online education accessible to all school-aged children in our country, regardless of their location, socioeconomic status, or any other factor. Students have become familiar with online education as they have completed almost two academic years of pure online education. Now everybody knows that online education will not be a closed chapter for the future. Hybrid learning and blended learning are words that are becoming more used in academia. At this juncture, it's significant to explore the challenges of online education in India. It's only when we identify the real problems and challenges, we can find out the solution in the right time. It's expected that the stakeholders like teachers, parents, students and administrators will strive for providing the best online education in their institutions. This paper particularly explore the main problems that hamper the online education in our country. Since our teachers, students, parents and entire academia are conditioned with offline education for a long term, some sort of attitudinal and technological problems are foreseen when they shift from traditional education to hybrid education.

ONLINE EDUCATION

Online learning is a term that encompasses web-based teaching, e-learning, distributed learning, net-based learning, web-based training, cyber learning, virtual learning and internet-based learning (Urdan & Weggen, 2000). It embraces a wide set of technology applications and learning processes including computer-based learning, web-based learning, virtual classrooms and digital collaborations (Urdan & Weggen, 2000).

“E-learning is education that uses computerised communication systems as an environment for communication, the exchange of information and interaction between students and instructors” (Bermejo, 2005). • “E-learning is learning based on information and communication technologies with pedagogical interaction between students and the content, students and the instructors or among students through the web” (González-Videgaray, 2007). “E-learning is defined as learning facilitated by the use of digital tools and content that involves some form of interactivity, which may include online interaction between the learner and their teacher or peers” (Ministry of Communication and Technology of New Zealand, 2008). “E-learning is the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to resources and services, as well as remote exchange and

collaboration” (Alonso et al., 2005). “E-learning is a broad combination of processes, content, and infrastructure to use computers and networks to scale and/or improve one or more significant parts of a learning value chain, including management and delivery” (Aldrich, 2005). “E-learning is defined as information and communication technologies used to support students to improve their learning” (Ellis, Ginns & Piggott, 2009). • “E-learning refers to educational processes that utilise information and communications technology to mediate synchronous as well as asynchronous learning and teaching activities” (Jereb & Šmitek, 2006).

“E-learning is the use of electronic media for a variety of learning purposes that range from add-on functions in conventional classrooms to full substitution for the face-to face meetings by online encounters” (Guri-Rosenblit, 2005). “E-learning is to take a course online using a modem, wireless, or cable connection to access academic course material from a computer, phone, or handheld device” (Governors State University, 2008). “E-learning is distance education through remote resources” (Marquès, 2006). “E-learning is the use of technology to deliver learning and training programs” (Elearning portal, 2009). “E-learning is the delivery of education (all activities relevant to instructing, teaching, and learning) through various electronic media” (Koohang & Harman, 2005). “E-learning is an on-line education defined as the self-paced or real-time delivery of training and education over the internet to an end-user device” (Lee & Lee, 2006). “E-learning is the delivery of a learning, training or education program by electronic means” (Li, Lau & Dharmendran, 2009). “E-learning is defined as education delivered, or learning conducted, by Web techniques” (Liao & Lu, 2008).

BLENDED LEARNING

Blended learning is an instructional methodology, a teaching and learning approach that combines face-to-face classroom methods with computer mediated activities for the teaching learning process. This pedagogical approach means a mixture of both face-to-face and online activities and the integration of synchronous and asynchronous learning tools, thus providing an optimal possibility for the arrangement of effective learning processes. Thus, in the field of education, the term blended learning is given to the practice of combining digital learning tools with more traditional classroom face to face teaching. In a true blended learning environment, the physical presence of both the student and the teacher in the same space is very basically needed. In such a setting where student and teacher has access to multiple digital tools, they are free to utilise all the resources for the good of learning activities.

Given the emergence of digital technologies and the emerging importance of leveraging technology for teaching-learning at all levels from school to higher education, the NEP-2020

recommends for use of blended models of learning. The NEP-2020 states that while speaking for digital learning and education, the importance of face-to-face in-person

Learning- which is in vogue in many educational institutions- is fully recognized. So, a mixture of face-to-face learning and digital learning will satisfy the students of our time to a certain extent. Accordingly, different effective models of blended learning

Should be identified for appropriate replication for different subjects.

The important features of blended learning environment are:

- Increased student engagement in learning.
- Enhanced teacher and student interaction.
- Responsibility for learning.
- Time management and flexibility
- Improved student learning outcomes
- Enhanced institutional reputation.
- More flexible teaching and learning environment
- More amenable for self and continuous learning
- Better opportunities for experiential learning

DIGITAL DIVIDE

Information and Communication Technology (ICT) offers many advantages like greater access to information, cost reduction in the labour sector, greater connectivity between people, better classroom interaction, easy transaction of the curriculum, better understanding of the subject taught, etc. The fact is that these advancements are not equally accessible to people all over the world because a certain imbalance exists which is called the digital divide. The Organisation for Economic Co-operation and Development (OECD) defines the digital divide as the “gap between individuals, households, businesses, and geographic areas at different socio-economic levels about both their opportunities to access information and communication technologies (ICTs) and to their use of the Internet for a wide variety of activities.” International Telecommunication Union (ITU), the specialised agency of the United Nations (UN), warned at the end of 2021 that almost half of the earth's inhabitants — some 2.9 billion people — do not even have access to the Internet. This affects 52 % of women and 42 % of men worldwide. This gap becomes even wider when we talk about regions: according to data taken from the Internet portal World Stats as of December 2021, in Africa only 43.1% of its inhabitants had Internet access, compared to 88.4 % of Europeans and 93.4 % of Americans. When it comes to India, As per ITU’s World Telecommunication/ICT Indicators Database,

only 43 percent of the population in India uses the internet. The IAMAI-Kantar Report ICUBE 2020 suggests that there are 58% male internet users and 42% female internet users in India. The National Family Health Survey 2019–21 (NFHS), however, shows a significantly larger gender gap in internet usage. The NFHS Report suggests that only 57.1% of the male population and 33.3% of the female population had ever used the internet. As per the Global System for Mobile Communications (GSMA) Report 2021, 79 percent of the adult male population and 67 percent of the adult female population are mobile phone owners in India. The report also suggests that there is a general trend of increase in mobile phone ownership by women in India. The NFHS also confirms this observation as there has been a clear growth in mobile phone ownership amongst women in India between 2015–16 and 2019–21. According to Global System for Mobile Communications (GSMA) Report 2022, gender gap in India between men and women in mobile ownership is 14% and in mobile internet use is 41%. The data shows the technological gap that separates some countries from others, despite the fact that 3G and 4G networks, while awaiting the massive expansion of 5G, are already reaching almost every corner of the planet.

CAUSES AND TYPES OF DIGITAL DIVIDE

The factors that influence the cause of digital divide include:

- **Computer literacy:** It is the ability of individuals to use computer and computer related technologies. Disparity in this ability leads to digital divide.
- **Tech savvy operations:** Individuals who are good at technology use have an advantage towards those who do not use it efficiently. They save their time more than those who aren't good at using technology. For example using internet banking, ATM machines etc.
- **Use of information:** Information is received quickly by those individuals who are more prone to digital devices. This can be very well visualised between rural-urban communities. Urban people use information more frequently than the rural one.
- **Working knowledge of English:** Language barrier is one of the important causes of the digital divide in India. Most of the online/digital applications prefer the English language and in India there is a flood of languages. Many places in India do not prefer the English Language. In fact they are not very used to English.
- **Internet:** Internet is a necessity of the present time. People using internet have more advantage in terms of comfort and convenience in the lifestyle than those who don't.

- **Economic inequality:** Economic inequality is the unequal distribution of income and opportunity between different groups in society. This inequality does not allow some people to buy digital devices frequently. Even education is also affected by the economic conditions of a particular family.
- **Social mobility:** Social mobility is shifting from one social status to another, commonly to a status that is either higher or lower. If there is shifting from higher social status to lower, then there is a chance that families of lower status are less used to digital devices.
- **Digital inequality:** The disparities in knowledge and ability of using digital and information technology among individuals with different demographics, socioeconomic backgrounds, and digital and information technology experience and competencies. In India, there is a disparity of internet connection between rural and urban internet connectivity.
- **Low literacy rate:** The literacy rate of India is relatively low in comparison to many countries of the world. This education disparity rate becomes the cause of digital divide in India.

The digital divide was initially attributed to underdevelopment and was perceived as something temporary that would disappear with the popularisation of technology. Instead, the divide persists today despite the mass marketing of electronic devices with Internet access. The causes can range from the high price of the above-mentioned devices to the lack of knowledge about their use or the lack of infrastructure for their access. In this regard, the types of digital divide are reviewed.

- **Access divide:** It refers to the possibilities that people have to access this resource. This is where socio-economic differences between people and between countries come into play, since digitisation requires very costly investments and infrastructure for less developed regions and for rural areas.
- **Use divide:** It refers to the lack of digital skills, which impedes the handling of technology. In this regard, and to give an example, the ITU points out that there are 40 countries in which more than half of their inhabitants do not know how to attach a file to an email.
- **Quality of use gap:** Sometimes they have the digital skills to find their way around the Internet, but not the knowledge to make good use of and get the most out of it. For example, with regard to access to quality information. A few years ago, ITU established

the Digital Access Index (DAI), which measures the overall ability of a country's citizens to access and use ICT. This index takes into account various variables grouped around five categories, which are as follows: quality, infrastructure, knowledge, accessibility and use.

CONSEQUENCES OF THE DIGITAL DIVIDE

Technological discrimination is a form of poverty and social exclusion, depriving some citizens of essential resources for development and wealth generation. These were seen a lot during the COVID-19 pandemic, as many students and workers found it difficult to work from home and follow classes online. The main effects of the digital divide are given below:

- Lack of communication and isolation: People in remote areas who do not have access to the Internet are disconnected. Something similar happens to urban residents who are disconnected which causes social isolation.
- Barrier to studies and knowledge: The coronavirus crisis has shown the effects of the digital divide in education: teachers and students out of the loop because they lack sufficient technology and digital skills. It also increases lack of knowledge by limiting access to knowledge.
- Accentuates social differences: Digital illiteracy reduces the chances of finding a job and accessing quality employment, which has a negative impact on the workers' economy.
- Gender discrimination: As we saw at the beginning, the digital divide negatively affects women more than men, which violates the principles of gender equality.

STRATEGIES ON BRIDGING THE DIGITAL DIVIDE

The UN includes the reduction of the digital divide (SDG 9) in its Sustainable Development Goals. That is why, in many places initiatives have been launched to facilitate access to technology. Some of the most relevant strategies are mentioned below.

- Digital literacy programs: They instruct people in less-favoured areas of Internet use to improve their personal well-being.
- Alliance for Affordable Internet (A4AI): This project, led by an international coalition of governments, businesses and civil society, aims to lower the cost of broadband in specific areas in Africa, Asia and Latin America.
- Free Basics: This initiative, promoted by Facebook and six other technology companies, aims to provide free access to a number of websites through a mobile application.

- Starlink: This project, promoted by tycoon Elon Musk, is launching satellites into space to provide high-speed Internet and global coverage at affordable prices.

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