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EXPLORING UNIVERSITY STUDENTS' ATTITUDE TOWARDS E-LEARNING: INSIGHTS ON GENDER AND SUBJECT-BASED DIFFERENCES

Prachi Pattanaik[1] & Bhawani Shankar Gadatia[2]

[1]Assistanat Professor, Department of Education, Hindi Teacher's Training Institute, Cuttack, Odisha-753008, India, prachipattanaik2@gmail.com

[2]Faculty of Education, Sonepur College, Sonepur, Odisha-767017, India, bhawanigadatia@gmail.com, Orcid ID: 0009-0004-6235-1364

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Abstract

This study investigates university students' attitude towards e-learning at Ravenshaw University, emphasizing gender and academic discipline differences. With the rise of digital education, e-learning has become a pivotal instructional method, yet student perceptions vary. Using a quantitative survey of 260 postgraduate students, the research reveals that 22% of students exhibit a high positive attitude towards e-learning, 54% show a moderate attitude, and 24% have a low attitude. Statistical analysis indicates no significant gender differences in attitudes, suggesting that male and female students view e-learning similarly. However, notable differences emerge between disciplines: Science students demonstrate a significantly more positive attitude compared to Humanities students. This disparity may be due to varying curricula, student engagement levels, and resource availability. The study highlights the need for targeted enhancements to address the challenges faced by students with lower attitudes and suggests that while e-learning is broadly accepted, its effectiveness can be optimized by integrating it more thoughtfully into traditional educational frameworks. The findings support the ongoing development of e-learning strategies that accommodate diverse student needs and preferences.

Keywords: *e-learning, university students, attitude*

1. Introduction

The rapid expansion of digital technology has revolutionized education, transforming traditional classrooms into virtual spaces where learning can occur anytime and anywhere. This shift towards e-learning has been both celebrated and scrutinized, particularly from the

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perspective of students who are at the heart of this transformation. Understanding students' attitude toward e-learning is crucial for educators and institutions striving to optimize this mode of education. While some students embrace the flexibility and accessibility that e-learning offers, others grapple with challenges such as reduced interaction and technical issues. This article delves into the varied attitudes of students towards e-learning, exploring the factors that influence their perceptions and the implications for the future of education in an increasingly digital world.

E-learning, once considered a supplementary mode of education, has rapidly evolved into a primary method of instruction for many institutions worldwide, particularly in the wake of the COVID-19 pandemic. As universities pivot to online platforms, understanding the attitudes of university students towards e-learning has become crucial in shaping the future of education.

E-learning has unlocked new possibilities for both educators and students by bridging the gap of physical distance. Online resources play a crucial role in assisting with project work, clearing doubts, and deepening knowledge. Nowadays, many students access the internet using mobile phones and laptops from their homes. However, while e-learning offers several advantages, it also has drawbacks. For instance, it may not be effective for those in areas with poor internet connectivity, and it often emphasizes theoretical learning over practical skills. Additionally, the absence of face-to-face interaction may contribute to social isolation. This raises an important question: what are students' perspectives on e-learning?

In light of previous research, which highlights varying attitudes towards e-learning influenced by factors such as gender, academic discipline, and socio-economic conditions (Thakkar & Joshi, 2017; Behera, Sao & Mohamed, 2016; Kar, Saha & Mondal, 2014; Mamattah, 2016), it becomes evident that a nuanced understanding of these attitudes is crucial for optimizing e-learning strategies. While some studies suggest no significant differences based on gender (Dhas, 2017) or location (Konwar, 2017), others point to variations influenced by academic stream and other demographic factors (Basumatary, 2018; Akimanimpaye, 2012). This research aims to build on these findings by specifically examining the attitudes of Ravenshaw University students towards e-learning, with a focus on gender and subject background. By addressing these variables, the study seeks to offer insights that can inform the development of more tailored and effective e-learning solutions. Understanding these attitudes will not only help in enhancing the digital learning experience

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but also contribute to shaping future educational strategies in an increasingly digital world. With this in mind, the objectives of the study are outlined as follows:

1. To explore and analyze the attitude of Ravenshaw University students towards e-learning.
2. To assess whether there are differences in attitudes toward e-learning between male and female students at Ravenshaw University.
3. To investigate how students' subject backgrounds, specifically those studying Science versus Humanities, affect their attitude toward e-learning.

2. Hypothesis of the Study

1. There is no significant difference between the attitude of Ravenshaw University students towards e-learning in relation to their gender (Male and Female).

2. There is no significant difference between the attitude of Ravenshaw University students towards e-learning in relation to their subject background (Humanities and Science subjects)

3. **Methodology**

This research utilized a quantitative survey-based methodology to assess student's attitude towards e-learning. The survey was designed to capture a broad range of perceptions related to the effectiveness, ease of use, and overall satisfaction with e-learning platforms. The researchers surveyed and attempted to collect the data from all the selected departments of the university.

4. **Participants**

The target population for this study comprised all postgraduate students enrolled at Ravenshaw University. The university's diverse range of postgraduate programs provided a comprehensive representation of students across various disciplines, making it an ideal setting for examining attitudes towards e-learning.

To ensure a representative sample, a stratified random sampling technique was employed. This method involved dividing the population into distinct subgroups or strata based on key characteristics, such as academic department or program. From each stratum, a random sample was selected to ensure that all departments were proportionally represented in the final sample. The sample for this study consisted of 260 postgraduate students from Ravenshaw University. This sample size was chosen to provide a robust dataset for analyzing attitudes towards e-learning while ensuring sufficient representation from different departments of the university. The details of selected sample are given in Table-1.

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Table 1- Distribution of Sample

Group		**N**		**Percentage**
Gender	Male	125	260	48.08%
	Female	135		51.92%
Subject Background	Science	98	260	37.69%
	Humanities	162		62.31%

5. Data Collection Instrument

To collect data for the present research, the researcher utilized a self-developed 5-point attitude scale consisting of 28 items. This scale is designed to assess students' attitudes towards e-learning by evaluating their perceptions across various dimensions: Effectiveness (Items 1-4), Ease of Use (Items 5-8), Engagement (Items 9-12), Motivation (Items 13-16), Technical Support (Items 17-20), Interaction (Items 21-24), and Overall Satisfaction (Items 25-28).

To ensure the reliability and validity of the instrument, the scale underwent a rigorous validation process. Reliability was assessed using Cronbach's alpha, yielding a value of 0.85, which indicates strong internal consistency. Validity was established through content validity, supported by expert reviews that confirmed the items accurately represent the intended constructs.

For scoring, respondents rated each item on a 5-point Likert scale, where 1 = Strongly Disagree and 5 = Strongly Agree. Scores for each dimension were calculated by summing the responses to the relevant items, with higher scores reflecting more positive attitudes towards e-learning. Total scores and dimension-specific scores were analyzed to draw conclusions about students' overall attitudes and perceptions.

6. Result and Discussion

The present study was an attempt to examine the attitude of Ravenshaw University students towards e-Learning in relation to their gender and subject background. The result of the study has been presented below.

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6.1. Distribution of Students' Attitudes toward E-Learning

Table 2- Attitude of Students towards E-Learning

Attitude Scores	No. of Students	Levels of E-learning
Above 261.46	57 (22%)	High
213.22 - 261.46	140 (54%)	Moderate
Below 213.22	63 (24%	Low

From Table 2, it is apparent that 22% of students exhibit a high positive attitude toward e-learning, indicating a strong appreciation and satisfaction with this mode of learning. This group values the flexibility and accessibility offered by e-learning. In contrast, the majority, 54%, fall into the moderate category, reflecting a balanced view where students recognize the benefits of e-learning but may also encounter challenges that limit their enthusiasm. The remaining 24% of students display a low attitude toward e-learning, suggesting significant dissatisfaction or difficulties, such as technical issues or reduced engagement. This distribution highlights that while e-learning is widely accepted, it is not uniformly embraced. The substantial proportion of students with moderate and low attitudes points to the need for targeted improvements in e-learning platforms.

6.2. Comparison of Attitude towards E-learning based on Gender

Table 3: Comparison of student's attitude towards E-learning with reference to gender

Group	N	Mean	SD	Difference in Means	SED	df	t-value	Remark
Male	125	236.4	26.06					Not significant
Female	135	239.1	21.43	2.7	2.97	258	0.91	

Table 3 shows that, the computed t value 0.91 with df 258 is smaller than the critical t -value 1.97 at 0.05 level of significance. The t-test result suggests that the difference in mean scores between males and females is not statistically significant at the 0.05 level. This implies that there is no strong evidence to suggest that the mean scores of the two groups are different in the population from which these samples were drawn. Hence, the null hypothesis, There is no significant difference in the attitude of Ravenshaw University students towards e-learning

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in relation to their gender (Male and Female) gets accepted (Dhas, 2017) and settlement (Konwar,2017). This finding contradicts with the findings of Sood & Singh (2014); Suri & Sharma, (2013); Vrana, et al (2005); Zabdi & Al- Alawai, (2016) who concluded, female students are more enthusiastic about e-learning and were more likely to engage with online resources compared to their male counterparts.

While the statistical analysis indicates no significant difference, it's important to consider the practical implications. The small mean difference of 2.7 might not be meaningful in real-world terms, especially given the variability within each group. In summary, the data suggests that the male and female groups have very similar mean scores, and any observed difference is likely due to random chance rather than a true difference in the population.

6.3. Comparison of Attitude towards E-learning based on Discipline

Table 4: Comparison of student's attitude towards E-learning in relation to their discipline

Group	N	Mean	SD	Mean Difference	SED	df	t-value	Remark
Science	98	233.56	22.05	21.21	2.77	258	7.67	Significant
Humanities	162	212.35	20.88					

Table 4 shows that, the calculated t- value 7.67 with df 258 is much greater than the critical t- value at both 0.01 and 0.05 level of significance. This implies that the difference in means between the Science and Humanities groups is statistically significant. Hence the null hypothesis, There is no significant difference in the attitude of Ravenshaw University students towards e-learning in relation to their subject background (Science and Humanities) gets rejected.

The significant difference in mean scores between the Science and Humanities groups suggests that students in the Science group perform better on the assessed metric (e.g., test scores, comprehension levels) than those in the Humanities group. This finding is in conformation with the findings of Bigatel & Williams, (2015); Eom et al., (2006); Gunawardena & McIsaac, (2004); Sebnmen, (2015) ; Bolliger & Wasilik, (2009) who found science and technology students are more likely to engage with e-learning platforms than Arts and Humanities students. Several factors might be contributing to this disparity such as,

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curriculum differences, student's interest and motivation, assessment methods, availability of resources, socio economic and cultural factors etc. A t-value of this magnitude reveals, the difference in means (21.21 points) between the Science and Humanities groups is highly unlikely to have occurred by random chance.

7. Educational implications

The study reveals a positive attitude towards e-learning among Ravenshaw University students; it suggests that the institution should continue integrating e-learning tools into the curriculum. E-learning can bridge gaps in accessibility, especially for students who may have difficulties attending in-person classes due to geographical, financial, or personal reasons. The study could highlight the importance of personalized learning experiences that e-learning platforms can offer. If students favour e-learning, it might be due to the ability to learn at their own pace and according to their own schedules.

8. Conclusion

The study on the attitude of Ravenshaw University students towards e-learning provides valuable insights into how students perceive the shift towards digital education. A generally positive attitude suggests that e-learning is not only accepted but also appreciated by the students, offering the university a strong foundation on which to build its digital education strategy.

To capitalize on this positive perception, the university should continue to integrate e-learning into its educational offerings, ensuring that these tools are used to enhance rather than replace traditional learning methods. The focus should be on creating a blended learning environment where the benefits of both online and in-person education are maximized.

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