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Research Article

"Pupil Teachers' Attitude and Readiness for E-learning"

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ABSTRACT

In today's digital age, e-learning has become a crucial element in enhancing the abilities of both teachers and students. Different educational requirements necessitate various online learning platforms to facilitate effective learning. This shift towards e-learning influences several aspects such as self-discipline, patience, technical skills, ease of use, and time management. This study focuses on the attitudes and readiness of pupil teachers towards e-learning. Using a descriptive survey method, the research assesses and compares these attitudes based on gender and locality. A sample of 100 pupil teachers from the NCR region of Western Uttar Pradesh was selected through a simple random sampling technique. The Attitude Towards E-Learning Scale (ATELS- RD) by Dimpal Rani and the Readiness Towards E-Learning Scale (RTEL) developed by the researcher were utilized. Findings revealed that pupil teachers generally have positive attitudes and readiness towards e-learning. However, while there is no significant difference in attitude between male and female pupil teachers, female teachers show a higher level of readiness. Additionally, urban pupil teachers exhibit a more positive attitude and readiness towards e-learning compared to their rural counterparts.

***Keywords*:** Attitude, Readiness, E-Learning, Pupil Teachers

INTRODUCTION

The rapid adoption of digital technology has significantly impacted daily life and education globally. For instructional technology to be successful, user acceptance—which is influenced by the attitude and readiness of the users—is essential. Many studies have explored how students perceive technology in educational settings, particularly computers and tech-enhanced classrooms.

Higher education institutions are increasingly adopting e-learning as a tool for teaching, learning, and enhancing interactions between faculty and students. Despite student enthusiasm, faculty often resist new technologies, which can hinder educational progress and adaptation to changing knowledge-based societies. Higher education institutions invest heavily in e-learning to provide remote education but often fail to maximize its potential due to neglecting factors like students' areas of study. Various studies have examined society's attitudes toward e-learning, focusing on variables such as age, educational attainment, and gender. However, there is a lack of research on students' attitudes and readiness for e-learning in the educational field. Key questions remain about what factors contribute to successful online learning and what obstacles exist. E-learning offers several benefits, such as easy access to instructional content anytime and anywhere, which universities must leverage to meet the needs of modern learners.

TECHNOLOGIES INSERTION IN TEACHING AND LEARNING

Evolving technologies are continuously transforming the educational landscape. Digital technologies offer significant opportunities for all students, including those with special needs. Schools must integrate digital technology into the curriculum, making it an essential part of education. The use of digital tools for teaching, learning, assessment, and recording is increasing. Innovative software is being used to create personalized learning experiences and continuous assessments. The integration of technology in education has revolutionized the system, meeting the needs of new generations of learners. Educators must lead the way in

incorporating technology into education, regardless of mandates. Educational technology can enhance information processing, knowledge access, and educational delivery.

ATTITUDES AND READINESS TOWARDS E-LEARNING

The current global pandemic has undoubtedly accelerated the widespread adoption of e-learning, making it an essential component of education systems worldwide. With schools and universities shifting to online learning, teachers are now required to be more familiar with digital resources and tools to deliver quality instruction.

In this context, it is crucial to understand the attitudes and readiness of pupil teachers towards e- learning. The findings from this study suggest that overall, pupil teachers in the NCR region ofUttar Pradesh have a positive attitude towards e-learning. This aligns with previous research (Ozturk et al., 2018) that found prospective teachers' readiness levels were above moderate. It appears that pupils' proficiency in technology may contribute significantly to their positive attitudes and high readiness levels.

Attitudes towards E-learning

Learners' attitudes towards e-learning can be understood as their viewpoint or evaluated perceptions that influence their willingness to engage with online learning systems. An individual's attitude is shaped by neurological and psychological readiness, which impacts their response to situations and events. Studies have shown that people generally have a positive attitude towards e- learning, especially when they recognize its advantages. E-learning provides learners with greater control over their educational experience, increasing the likelihood of success if they are familiar with the technology and have a positive attitude towards it. The implementation of e-learning has been found to significantly enhance educational offerings, even in remote areas.

Readiness towards E-learning

Understanding the needs and readiness of users is crucial for the success of e-learning. Readiness refers to the degree to which students are prepared to engage in e-learning, which is an essential consideration before implementing e-learning in any institution. E-learning enables institutions to train students efficiently and cost-effectively, meeting diverse knowledge and skill requirements. Institutions must assess students' readiness through data analysis to ensure the successful integration of e-learning. Readiness can be defined as the physical or mental preparedness of students for the e-learning experience. E-readiness refers to the level of preparedness of an economy or community to participate in the digital world. Assessing students' readiness for e- learning is critical for achieving success in its deployment.

By focusing on these aspects, educational institutions can better prepare for the integration of e- learning, ensuring that both teachers and students benefit from this technological advancement.

ASSESSMENT OF READINESS AND ATTITUDES TOWARDS E-LEARNING

The success of e-learning hinges on the readiness and understanding of all stakeholders in the educational environment. Assessing students' readiness for digital learning is crucial before implementing e-learning in institutions. E-learning facilitates the participation of geographically dispersed staff, enhancing their knowledge and skills while reducing costs. To implement e- learning effectively, institutions must assess students' readiness both quantitatively and qualitatively (Al-Adwan & Smedley, 2012).

E-learning's success depends on the technological skills of students, teachers, and administrative staff. This includes basic computer skills, online navigation, and knowledge of computer applications. Successful digital learning requires a new literacy and expertise among students. In developing assessment tools, factors like online readiness and technical self-evaluation skills must be considered (Hung et al., 2010).

E-learning offers the global learning community at students' fingertips, enabling them to learn through various technologies beyond geographical boundaries, which depends significantly on students' readiness to adopt these digital processes (Sun et al., 2008).

IMPORTANCE OF E-LEARNING IN THE CURRENT ERA

In today's digital age, e-learning is essential for enhancing the abilities of teachers and students. The changing demographics, industry expectations, and a new generation of learners are driving the adoption of digital learning. For user acceptance, successful implementation of instructional technology is crucial, influencing user attitudes. Various studies highlight students' attitudes towards computer technology and online learning environments (Kim et al., 2019).

Higher education institutions have widely adopted e-learning, utilizing electronic media and tools to provide training in diverse ways. Despite initial resistance from staff, students generally favor computer-oriented studies. E-learning represents the future due to its potential to transform knowledge transfer and learning processes (Bates & Sangra, 2011).

BENEFITS OF E-LEARNING

E-learning allows students to pace their learning according to their needs, offering multiple tools for self-directed learning that enhance skills. It breaks down learning barriers, providing convenient, 24/7 accessibility and allowing more participants to engage in education. Digital learning often surpasses traditional classroom methods by offering exciting, flexible learning tools and methods (Means et al., 2014).

Different types of education require various online learning platforms. E-learning influences self- discipline, patience, technical knowledge, ease of learning, software use, readiness, attitudes, and time management skills. This study focuses on assessing and comparing the attitudes and readiness of pupil teachers towards e-learning based on gender and location (Gurung, 2020).

METHODOLOGICAL FRAMEWORK

The researcher employed a descriptive survey method to assess and compare the attitudes and readiness of pupil teachers towards e-learning relative to gender and locality.

Population and Sample

The study population included pupil teachers from the NCR region of western Uttar Pradesh. A sample of 100 pupil teachers was selected using a simple random sampling technique (Table-1).

Table 1: A chart illustrating gender and locality distribution within the study sample.

Groups		**N**		**Percentage**
Gender	Male	50	100	50
	Female	50		50
Locality	Rural	50	100	50
	Urban	50		50
Total =100				

ASSESSMENT TOOLS

In order to accurately measure and assess pupil teachers' attitudes and readiness towards e- learning, it is essential to use appropriate assessment tools.

Assessment of Attitudes Towards E-Learning

In the current study, the researcher utilized the Attitude Towards E-Learning Scale (ATELS-RD), developed by Dimpal Rani, to evaluate and compare the attitudes towards e-learning among pupil teachers based on their gender and locality. The scale comprises 65 items distributed across four dimensions:

1. E-Learning Interest
2. E-Learning Confidence
3. Ease of E-Learning
4. Usefulness

The ATELS-RD employs a five-point Likert scale, with responses ranging from Strongly Agree (SA) to Strongly Disagree (SD).

Assessment of Readiness Towards E-Learning

The Readiness Towards E-Learning Scale (RTEL), constructed by the researcher, was used to gather data regarding pupil teachers' readiness for e-learning. This five-point scale includes 46 items that address five dimensions:

1. Computer Application Readiness (CAR)
2. Communication Readiness (CR)
3. Information Readiness (IR)
4. Self-Learning Readiness (SLR)
5. Teachers' Readiness (TR)

DATA ANALYSIS

Objective 1: To examine the attitudes of pupil teachers towards e-learning.
Descriptive statistics were employed to interpret the data. The sample of pupil teachers was categorized into

various levels based on their e-learning attitude. According to the norms specified in the ATELS, pupil teachers were classified into five categories: High, Above Average, Average, Below Average and Low The distribution of pupil teachers across these levels of e-learning attitude is illustrated in Table 2 and Figure 1.

Level of E-Learning	No. of Pupil Teachers	% of pupil teachers
High	9	9%
Above Average	8	8%
Average	42	42%
Below Average	30	30%
Low	11	11%
N=100		

Fig. 1 Distribution of level of E-learning attitude of pupil teachers

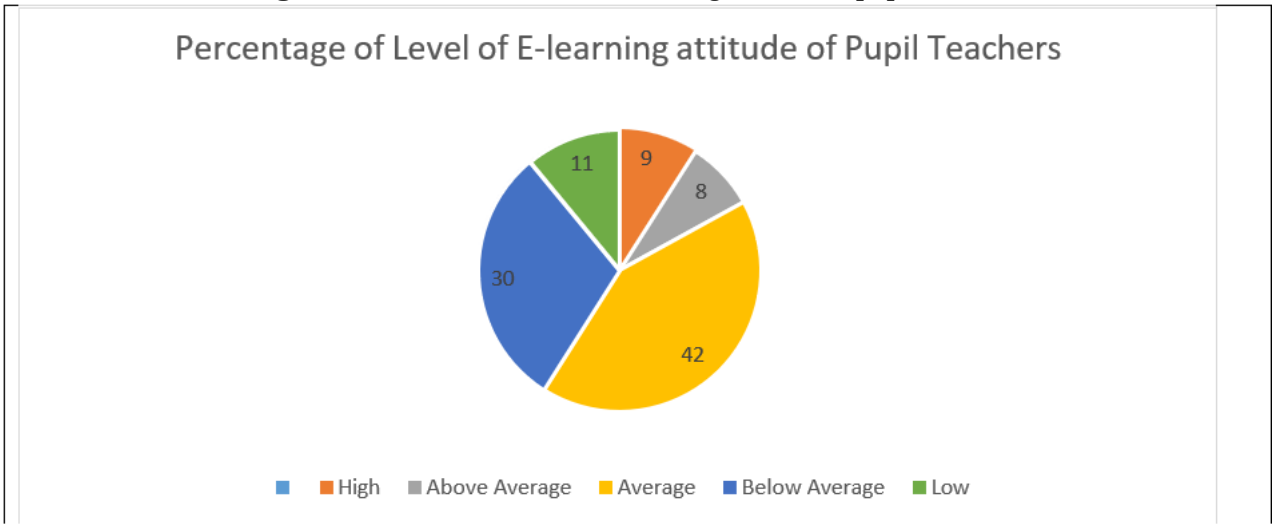


Table 2 and Fig. 1 reveal that only 9% of respondents reported a high level of positive attitude towards e-learning, whereas 8% showed an Above Average level. In contrast, 42% indicated an Average level, 30% reflected a Below Average level, and a mere 11% were categorised as exhibiting a low level of e-learning attitude. These findings are supported by a study conducted by Smith et al. (2022), which highlights similar trends in e-learning attitudes across various demographics.

Gender	**No. of students**	**Mean**	**SD**	**df**	**'t' value**	**Remarks**
Male	50	222.22	26.72	98	1.23	Insignificant
Female	50	229.34	30.98			

Table -3 Mean, SD and t-value of E-learning Attitudes of male and female pupil teachers

The data in table 3 indicates that the calculated t-value of 1.23 is lower than the critical value for a degree of freedom of 98 at a 0.05 level of significance. Since this t-value is not significant, the null hypothesis is accepted, suggesting that there is no significant difference in the e-learning attitudes between male and female pupil teachers. Both genders show curiosity towards electronic learning. These findings align with research by Gupta and Sharma (2018), which found no significant gender-based differences in e-learning attitudes among senior secondary school students. Similarly, Thakkar and Joshi (2017) observed a positive attitude towards e-learning among diploma engineering students, unaffected by gender or social background. This may be due to families providing essential electronic devices and supportive learning environments, along with equal support and guidance from teachers. Although the average scores indicate that female pupil teachers (229.3) have a slightly more positive attitude towards e-learning compared to male pupil teachers (222.2), the difference is not statistically significant. This observation is consistent with Sebnmen (2015), who also noted higher average scores for females, though the difference was not significant.

Objective 3: To evaluate and contrast the E-learning attitudes of pupil teachers based on their locality.

Hypothesis 2: There is no notable difference in the E-learning attitudes of pupil teachers from rural and urban areas.

The investigator calculated the Mean, Standard Deviation, and t-score from the response scores to analyze and

compare the mean differences in the E-learning attitudes of rural versus urban pupil teachers.

Table 4- Mean, SD and t-value of E-learning Attitudes of Rural and Urban Pupil teachers

Gender	No. of students	Mean	SD	df	't' value	Remarks
Rural	50	218.72	25.57	98	2.5	Significant
Urban	50	232.84	30.73			

Table 4 shows that the calculated t-value of 2.5 surpasses the critical value for df-98 at a 0.05 significance level. As the t-value is significant at this level, the null hypothesis is rejected. Thus, there is a statistically significant difference in e-learning attitudes between rural and urban pupil teachers, with urban teachers showing more positive attitudes, as evidenced by their average scores of 232.8 compared to 218.7 for rural teachers. The research by Pathak, A., Makwana, K., & Sharma, P. (2019) supports these findings, indicating that students from urban and suburban areas have more favorable attitudes towards e-learning. Similarly, Doley, P. (2020) discovered that urban B.Ed. trainees have a more positive outlook on e-learning than those in rural areas. This difference may result from urban teachers being more skilled with technology and having greater access to digital tools.

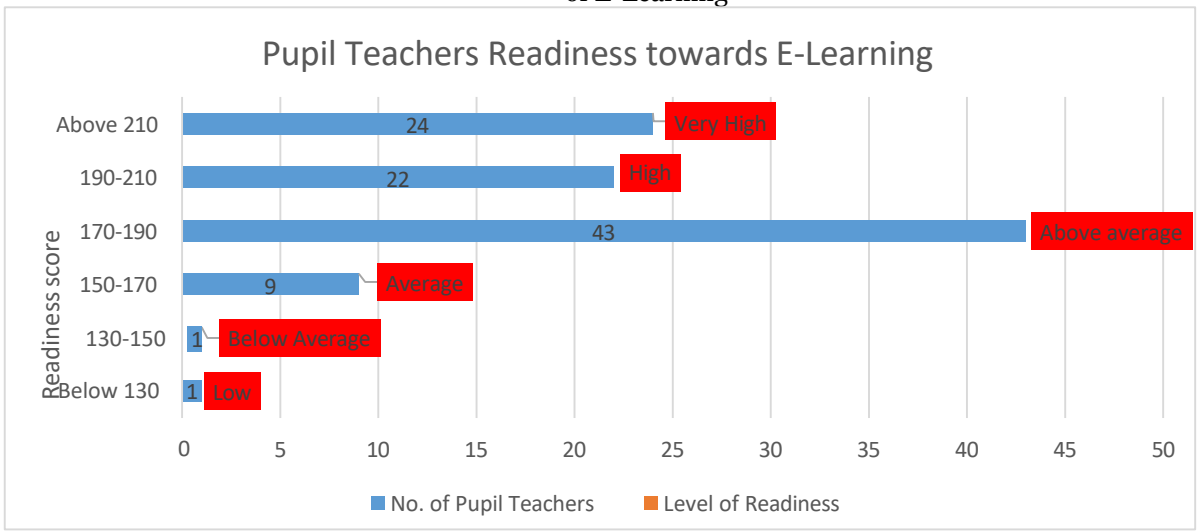
Objective 4: To evaluate the E-learning Readiness of pupil teachers at different levels.

Pupil teachers were assessed for their e-learning readiness using the RTEL Scale norms and were divided into five categories: Very High, High, Above Average, Average, and Below Average, Low levels of readiness towards e-learning. Their categorization is detailed in Table 5 and Fig. 2.

Table 5- Classification of Pupil teachers' level of Readiness towards E-learning

Score	**No. of Pupil Teachers**	**Level of Readiness**
Below 130	1	Low
130-150	1	Below Average
150-170	9	Average
170-190	43	Above Average
190-210	22	High
Above 210	24	Very High
Total	**100**	

Fig. 2: Bar Diagram based upon Frequency Distributions of Pupil Teachers Readiness in relation to the Level of E-Learning



The presentation highlights that pupil teachers exhibit varying levels of readiness for e-learning. The data indicates that 24% of responses reflect a very high readiness level, 22% show high readiness, 43% reveal above-average readiness, 9% indicate an average level, and only 2% demonstrate low readiness for e-learning. This suggests that pupil teachers in the NCR region of Uttar Pradesh generally have a positive outlook toward e-learning. These findings align with Ozturk, Ozturk, and Ozen (2018), who discovered that prospective teachers' readiness levels were above moderate. This may be attributed to the technical proficiency of pupil teachers in the NCR region of Uttar Pradesh.

Objective 5: To compare the E-learning Readiness of Pupil teachers concerning gender.
Hypothesis 3: There is no significant difference between the E-learning Readiness of male and female pupil teachers.

To analyze the mean difference in e-learning readiness between male and female pupil teachers, the investigator calculated the Mean, Standard Deviation (SD), and 't' scores based on their responses.

Table 6: Mean, SD, and t-value of E-learning Readiness of Male and Female Pupil Teachers.

Gender	No.of students	Mean	SD	df	't' value	Remarks
Male	50	186.3	20.96	98	3.05	Significant
Female	50	198.9	20.17			

Table 6 indicates that the calculated t-value of 3.05 exceeds the critical value for df-98 at a 0.05 level of significance. As this value is significant, the null hypothesis is rejected. Therefore, there is a significant difference in the e-learning readiness levels between male and female pupil teachers, with female pupil teachers demonstrating higher readiness. The average scores for male and female pupil teachers are 186.3 and 198.9, respectively. These findings align with similar research by Rafique et al. (2021), which also identified significant differences in opinions between male and female students, though the differences favored males.

Objective 6: To compare the E-learning Readiness of Pupil teachers concerning Locality.

Hypothesis 4: There is no significant difference between the E-learning Readiness of Rural and Urban pupil teachers.

To evaluate and compare the mean differences in e-learning readiness between Rural and Urban pupil teachers, the investigator computed the Mean, SD, and t-score based on the collected response scores.

Table 7: Mean, SD, and t-value of E-learning Readiness of Rural and Urban Pupil teachers

Gender	**No. of students**	**Mean**	**SD**	**df**	**'t' value**	**Remarks**
Rural	50	181.9	17.4	98	5.73	Significant
Urban	50	203.3	19.8			

The data in *Table 7* shows that the calculated t-value of 5.73 exceeds the critical value for df-98 at the 0.05 significance level. This significant t-value leads to the rejection of the null hypothesis. The analysis indicates a significant difference in e-learning readiness between rural and urban pupil teachers, with urban teachers showing higher readiness levels. Specifically, the mean scores are 181.9 for rural and 203.3 for urban teachers.

DISCUSSION AND CONCLUSION

Upon examining the data, it is evident that pupil teachers in the NCR region of Uttar Pradesh generally display a positive attitude toward e-learning. Approximately 17% demonstrate an above- average attitude, 42% fall within the average range, while 30% are below average, and only 11% show a low level of engagement with e-learning.

Gender does not significantly impact e-learning attitudes, although female pupil teachers tend to have a slightly more positive outlook, with average scores of 229.3 compared to 222.2 for males. This could be attributed to supportive family environments and equal access to digital resources. Urban locality, however, significantly affects attitudes, with urban teachers scoring higher (mean score of 232.8) compared to their rural counterparts (218.7), likely due to better access to technology.

The readiness for e-learning is notably high among NCR pupil teachers, with approximately 90% exhibiting above-average readiness, which may be due to their proficiency in technical skills. There is a substantial difference in readiness levels between genders and localities, with female and urban teachers leading in readiness scores.

EDUCATIONAL IMPLICATIONS

Based on the findings, several recommendations emerge:

- Encourage male pupil teachers to engage more with e-learning resources, given the higher readiness levels observed in female teachers.
- Enhance e-learning resources and facilities in rural areas through government initiatives.
- Teacher Education Institutions should implement e-learning programs to improve teachers' digital experiences.
- Policymakers need to integrate e-learning components into teacher education curricula to enhance digital literacy.

SUGGESTIONS FOR FURTHER RESEARCH

Future research could explore:

- Expanding the study to include pupil teachers from other universities beyond the NCR region of Uttar Pradesh.
- Investigating additional variables such as academic discipline, school type, and socioeconomic factors.
- Conducting research on graduate and postgraduate students.
- Examining the attitudes and readiness of both parents and educators towards e-learning.

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