

TEACHER TRAINEES' ATTITUDES TOWARDS E-LEARNING PLATFORMS: AN EMPIRICAL STUDY

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Abstract

The rapid integration of digital technologies in teacher education has made E-learning platforms an essential part of academic training. This study examines teacher trainees' attitudes toward E-learning platforms, about gender and locality. A descriptive survey was conducted on a sample of 200 teacher trainees from Dehradun district, equally divided by gender (100 male and 100 female) and locality (urban and rural). The standardised Attitude toward E-learning Scale, developed by Dr Manmohan Gupta, was used. Data were analysed using mean, standard deviation, and an independent sample t-test. The results showed significant differences in attitudes toward E-learning based on locality, while differences based on gender were not statistically significant. Urban trainees exhibited a more positive attitude compared to rural trainees. The study emphasises the need to improve digital infrastructure and provide orientation programs for rural teacher trainees. The findings offer valuable insights for policymakers, teacher educators, and curriculum planners.

Keywords: Teacher trainees, E-learning platforms, Attitude, Gender, Locality, Teacher education.

Introduction

E-learning platforms have transformed the landscape of education by enabling flexible, interactive, and learner-centred instructional approaches. In teacher education, E-learning is no longer optional but a fundamental requirement for preparing competent and technologically skilled teachers. Teacher trainees are expected to integrate digital tools into pedagogy, assessment, and classroom management. However, the effectiveness of E-learning depends largely on learners' attitudes toward its use.

Attitude affects acceptance, motivation, engagement, and academic adjustment in digital environments. A positive attitude toward E-learning boosts confidence and self-directed learning, while a negative attitude can lead to resistance, anxiety, and poor use of digital resources. In a diverse country like India, factors such as gender and locality further impact access to technology, exposure, and learning experiences. Therefore, understanding teacher trainees' attitudes toward E-learning platforms is crucial for enhancing teacher education programs and providing equitable digital learning opportunities.

Need & Significance of the Study

The rapid growth of E-learning in teacher education has revealed gaps in access, skills, and acceptance among teacher trainees. Many trainees, especially those from rural areas, encounter challenges such as limited internet connectivity, insufficient training, and low confidence in using technology. Additionally, gender differences in technology adoption remain a topic of debate in educational research. Since teacher trainees are future educators, their attitudes toward E-learning will directly affect classroom practices and student learning outcomes. Therefore, it is essential to systematically study teacher trainees' attitudes toward E-learning platforms, considering gender and location, to develop effective training strategies and inclusive digital policies.

Review of Related Literature

Several studies have examined attitudes toward E-learning among teacher trainees and higher-education students.

Gamlem (2025) explored pre-service teachers' attitudes and experiences with E-learning platforms in Norway using a cross-sectional survey of primary and lower secondary teacher trainees. The researcher collected data through standardised attitude measures and scales of E-learning engagement. Analyses revealed that overall attitudes were generally positive, and trainees appreciated the flexibility and accessibility of digital platforms. The study concluded that positive attitudes toward E-learning are linked with increased integration of technology into future teaching practices and recommended enhanced training on digital pedagogy.

Zhang & Zhu (2025) investigated the effects of pre-service training on STEM teachers' attitudes toward ICT-enhanced teaching, adopting a mixed-methods approach with questionnaires and interviews. The study demonstrated that pre-service instructional strategies—such as role models, collaboration, and experiential feedback—significantly improved attitudes toward ICT tools by enhancing perceived ease of use and perceived usefulness. The results suggest that structured pre-service training fosters more favourable attitudes toward educational technologies, which include E-learning platforms.

Ishita and Joshi (2025) conducted a descriptive survey to compare the attitudes of teacher educators and prospective teachers toward E-learning through Massive Open Online Courses (MOOCs). The study included 100 teacher educators and 100 prospective teachers selected through purposive sampling. Data were collected using a researcher-developed attitude scale. The findings revealed that both groups possessed positive attitudes toward MOOCs as E-learning platforms, and no significant difference was found between their attitudes. The study concluded that MOOCs are widely accepted in teacher education and can effectively support flexible and self-paced learning among prospective teachers.

Camilleri, Watted, and Attard Tonna (2025) investigated teachers' perceptions and attitudes toward Massive Open Online Courses (MOOCs) using the Technology Acceptance Model (TAM). The study adopted a mixed-methods design involving 144 pre-service and in-service teachers who participated in a "Teaching Thinking" MOOC. Data were collected through pre- and post-course surveys and open-ended questionnaires. The findings indicated that participants' perceptions of the usefulness and ease of use of MOOCs improved significantly after completing the course. Instructor support, peer interaction, and opportunities for self-directed learning positively influenced attitudes toward MOOCs. The study concluded that well-designed MOOCs enhance teachers' acceptance of E-learning platforms and strengthen their readiness to integrate digital technologies into teaching.

Nancy and Muthupandi (2025) examined the self-efficacy beliefs of pre-service teachers toward digital education using a quantitative survey design. Data were collected from **120 pre-service teachers** through a self-efficacy questionnaire. The findings revealed that technology competency significantly influenced teachers' confidence in using digital tools, whereas qualification, teaching discipline, and access to technology showed no significant effect. The study concluded that strengthening digital competencies through structured training and practical experiences enhances pre-service teachers' self-efficacy and promotes the effective integration of digital education in future teaching.

Geeta and Dwivedi (2024) examined the attitude and readiness of pupil teachers toward E-learning using a descriptive survey method. The study was conducted on a sample of 100 pupil teachers from the NCR region of Western Uttar Pradesh selected through simple random sampling. Data were collected using the Attitude Towards E-learning Scale

(ATELS-RD) developed by Dimpal Rani and a Readiness Towards E-learning Scale (RTEL) developed by the researchers. The findings revealed that pupil teachers possessed a generally positive attitude and readiness toward E-learning. No significant gender difference was found in attitude; however, female pupil teachers demonstrated higher readiness than males. Urban pupil teachers also exhibited significantly more positive attitudes and greater readiness than their rural counterparts. The study concluded that favourable attitudes and adequate readiness are essential for the successful integration of E-learning in teacher education programmes.

Patel (2024) revealed that positive attitudes toward E-learning were associated with higher academic engagement and confidence.

Verma and Joshi (2024) concluded that training in digital tools significantly improves teacher trainees' perception of E-learning effectiveness. However, limited studies are available focusing specifically on the Dehradun district and using balanced samples based on gender and locality. The present study attempts to bridge this research gap. Across foreign and Indian contexts, research reveals a consistent pattern: teacher trainees generally hold positive attitudes toward E-learning platforms, though the strength and determinants of these attitudes fluctuate with training experiences, context (e.g., pre/post COVID), technological readiness, and satisfaction factors such as ease of use and perceived usefulness. Foreign studies emphasise pre-service training and acceptance models as key drivers of attitude formation, while Indian studies highlight contextual variations, satisfaction dimensions, and stream differences in attitude. Together, they affirm that attitude toward E-learning is a multi-dimensional construct influencing future teacher performance and digital integration in educational practice.

Srivastava (2023) examined the attitudes of B.Ed. pupil teachers toward E-learning using a descriptive survey method. The study included 100 B.Ed. students from government and self-financed teacher education institutions affiliated with state and central universities in Varanasi. A stratified random sampling technique was employed, and data were collected using Kennedy et al.'s (2006) *Experiences with and Perceptions of ICT and E-learning Survey for Students*. The findings indicated that B.Ed. pupil teachers possessed a positive attitude toward E-learning. No significant differences were observed based on gender or type of institution, whereas a significant difference was found between urban and rural students, with urban students demonstrating more favourable attitudes. The study concluded that E-learning is an effective approach in teacher education and recommended strengthening digital learning opportunities to enhance future teachers' professional competencies.

Mehta (2023) observed that urban teacher trainees showed significantly more favourable attitudes toward E-learning compared to their rural counterparts.

Kaur and Singh (2022) reported that female trainees demonstrated slightly higher acceptance of online learning than male trainees, though the difference was not statistically significant.

Sharma (2021) found that teacher trainees generally possessed a moderately positive attitude toward E-learning, but rural students faced more difficulties due to infrastructural limitations.

Padmavathy (2021) investigated the attitudes and satisfaction factors related to E-learning among pre-service teacher trainees before and during the COVID-19 pandemic. The study adopted a normative survey method and selected 174 pre-service teacher trainees through convenience sampling. Data were collected using Dimpal Rani's Attitude Towards E-learning Scale, which measured attitudes along with satisfaction factors such as perceived

usefulness, perceived ease of use, perceived confidence, and perceived interest. The findings revealed significant differences in overall attitude, perceived usefulness, ease of use, and confidence between the pre-pandemic and pandemic periods, whereas perceived interest did not differ significantly. The study concluded that contextual changes brought about by the COVID-19 pandemic significantly influenced teacher trainees' attitudes toward E-learning and emphasized the need to strengthen digital competencies and learner support in teacher education programmes.

Statement of the Problem -

“Teacher trainees' attitudes towards E-learning platforms: an empirical study”

Operational Definition

Locality - is operationally defined as the residential background of teacher trainees, categorised as urban or rural based on their self-reported place of residence.

Gender - It is operationally defined as the biological classification of teacher trainees into male and female categories as reported by the respondents in the personal information section of the tool.

E-learning platforms– It refers to digital learning systems such as Learning Management Systems, MOOCs, video conferencing tools, and online educational resources through which instruction is delivered and accessed by teacher trainees.

Attitude toward E-learning – It is operationally defined as the score obtained by teacher trainees on the standardised Attitude toward E-learning Scale used in the present study, reflecting their beliefs, feelings, and readiness to use digital learning platforms.

Teacher trainees – They refer to students enrolled in B.Ed. or equivalent teacher education programmes in recognised colleges of Dehradun district who are undergoing professional training to become future teachers.

Objectives of the Study

1. To study the attitude of teacher trainees toward E-learning platforms.
2. To compare the attitude of male and female teacher trainees toward E-learning.
3. To compare the attitude of urban and rural teacher trainees toward E-learning.

Hypotheses

1. There is no significant difference in attitude toward E-learning between male and female teacher trainees.
2. There is no significant difference in attitude toward E-learning between urban and rural teacher trainees.

Scope of the Study

1. The study provides insight into teacher trainees' readiness for digital learning.
2. The findings help in improving teacher education programs and digital training modules.

Delimitations of the Study

1. The study is limited to teacher trainees of Dehradun district only.
2. Only gender and locality variables are considered.
3. The study is confined to attitudes toward E-learning platforms only.

METHODOLOGY OF THE PRESENT STUDY

Research Design

For the present investigation, the descriptive survey method of research was employed. This method was considered appropriate as the study aimed to examine the attitude of teacher trainees towards E-learning platforms and to compare attitudes based on gender and locality without manipulating any variables.

Variables Involved

The variables identified for the present study were as follows:

- Attitude toward E-learning Platforms
- Gender (Male and Female)
- Locality (Urban and Rural)

Population of the Present Study

All teacher trainees enrolled in B.Ed. and equivalent teacher education programmes in colleges of Dehradun District constituted the population of the present study.

Sample and Sampling Technique of the Present Study

The sample for the present study consisted of 200 teacher trainees, including 100 male and 100 female trainees, selected from various teacher education colleges of Dehradun District. Among them, trainees were also categorised based on locality as urban and rural.

The data for the present study were collected using the random sampling technique, which ensured equal opportunity for every trainee to be selected in the sample.

Tools Used

For the collection of data, the following tool was used:

- **E-learning Attitude Scale** (standardised tool by **Prof. (Dr.) Manmohan Gupta**), which measures teacher trainees' beliefs, interest, confidence and readiness toward the use of E-learning platforms. The tool was found to be reliable and valid for research purposes.

Statistical Techniques Used

For the analysis and interpretation of data, the following statistical techniques were employed:

- **Mean and Standard Deviation** to describe the level of attitude toward E-learning.
- **t-test** to study the significance of the difference in attitude toward E-learning between:
 - Male and female teacher trainees
 - Urban and rural teacher trainees

These statistical techniques were used to test the hypotheses formulated for the present study.

Results and Discussion

Table 1:
Gender wise Sample Distribution

Gender	Number of Trainee Teachers
Male	100
Female	100
Total	200

The sample consisted of 200 teacher trainees, equally divided into 100 male and 100 female participants. This equal representation ensured balanced comparison and minimised gender bias in statistical analysis, thereby strengthening the validity of the findings.

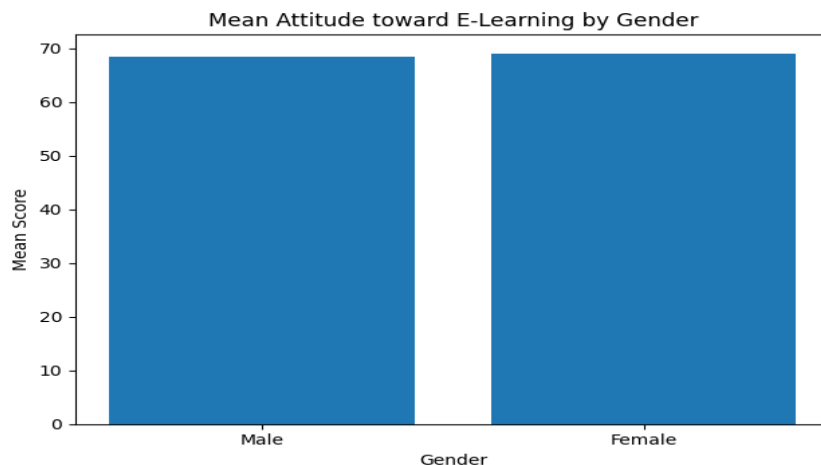
Table 2:
Locality Wise Sample Distribution

Locality	Number of Trainee Teachers
Urban	111
Rural	89
Total	200

The sample also included 111 urban and 89 rural teacher trainees. Such proportional distribution ensured fair representation of locality groups and allowed reliable comparison of attitudes toward E-learning across residential backgrounds.

Table 3 :
Mean S.D. & t Value of attitude of Male and Female teacher trainees towards E-learning

The mean score of male teacher trainees ($M = 68.45$, $SD = 8.21$) and female teacher trainees ($M = 69.12$, $SD = 7.98$) shows only a marginal difference. The calculated t-value (0.585) is lower than the table value at the 0.05 level of significance, indicating that the difference is not significant.



Graph 1 Interpretation

The bar graph illustrates nearly equal mean scores for male and female teacher trainees, visually confirming the statistical finding that gender does not significantly influence attitude toward E-learning.

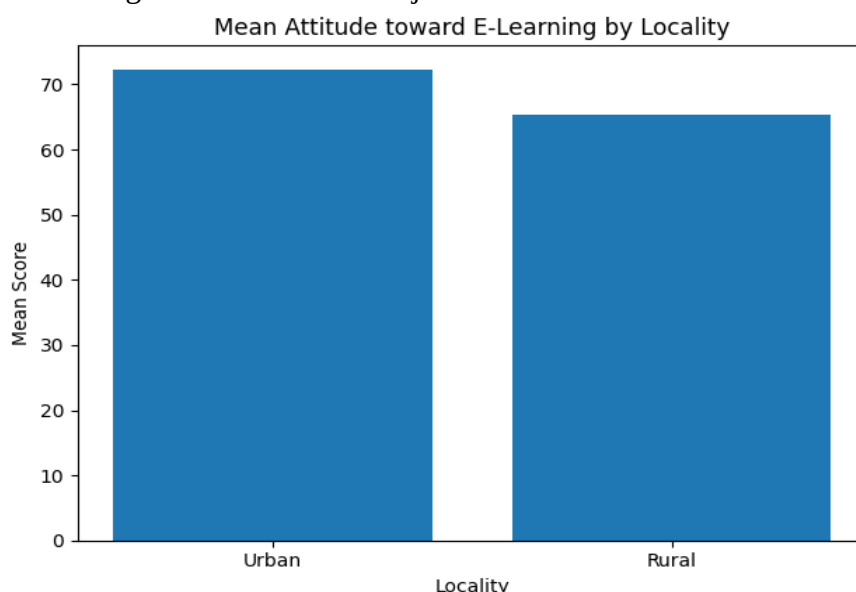
Table 4 :
Mean S.D. & t Value of attitude of urban and rural teacher trainees toward E-learning

Group	N	Mean	SD	t-Value	Level of Significance
Male	100	68.45	8.21	0.585	Not Significant
Female	100	69.12	7.98		

Group	N	Mean	SD	t-Value	Level of Significance
Urban	111	72.34	7.45	6.306	Significant at 0.05 & 0.01 Level
Rural	89	65.28	8.36		

Urban trainees obtained a higher mean score ($M = 72.34$, $SD = 7.45$) compared to rural trainees ($M = 65.28$, $SD = 8.36$). The calculated t-value (6.306) is statistically significant at the 0.05 level.

This indicates that locality has a significant influence on attitude toward E-learning. Urban teacher trainees demonstrate a more favourable attitude than rural trainees, possibly due to better technological exposure, internet accessibility, and digital familiarity. Hence, the null hypothesis related to gender difference is rejected.



Graph 2 Interpretation

The bar graph clearly shows higher mean scores for urban trainees compared to rural trainees, reinforcing the significant impact of locality on attitude toward E-learning platforms.

Discussion

The findings indicate that gender does not play a significant role in shaping attitudes toward E-learning, suggesting equal acceptance among male and female trainees. However, locality significantly influences attitude, emphasising the digital divide between urban and rural learners. Limited infrastructure, training, and exposure may be responsible for lower attitudes among rural trainees.

Conclusion

The present study concludes that teacher trainees generally show a moderately positive attitude toward E-learning platforms. Gender does not significantly affect attitude, while locality plays a crucial role. Urban trainees demonstrate greater acceptance and readiness for E-learning compared to rural trainees. The study recommends the implementation of digital literacy programs, infrastructural development, and orientation workshops, especially for rural teacher trainees. Strengthening E-learning acceptance among future teachers will ensure more effective integration of technology in school education.

Educational Implication

- **Uniform E-learning Training:** Since gender does not significantly influence attitudes toward E-learning, teacher education institutions can design and implement common E-learning training programmes for all teacher trainees without gender-specific modifications.
- **Support for Rural Teacher Trainees:** Special orientation programmes, improved digital infrastructure, and hands-on technology training should be provided to rural teacher trainees to reduce disparities in attitudes and promote equitable access to E-learning.
- **Integration of E-learning into Teacher Education:** Teacher education curricula should incorporate E-learning platforms and digital pedagogical practices to enhance trainees' technological competence and readiness for modern classroom environments.
- **Continuous Professional Development:** Regular workshops, seminars, and practical sessions on emerging educational technologies should be organised to strengthen teacher trainees' confidence, motivation, and effective use of E-learning platforms.
- **Institutional Support and Resource Availability:** Teacher education institutions should ensure reliable internet connectivity, adequate digital devices, technical assistance, and access to quality online learning resources to create a supportive environment that encourages positive attitudes toward E-learning

Suggestions for further Research

- **Expand the Scope of the Study:** Future research may be conducted with larger and more diverse samples from different states or regions of India to improve the generalizability of the findings.
- **Include Additional Variables:** Researchers may examine the relationship between attitudes toward E-learning and variables such as digital literacy, academic achievement, self-efficacy, motivation, technological competence, and socioeconomic background.
- **Conduct Comparative Studies:** Comparative studies can be undertaken to investigate differences in attitudes toward E-learning among teacher trainees from government and private institutions, urban and rural areas, or across different teacher education programmes.
- **Adopt Mixed-Method or Longitudinal Designs:** Future studies may use mixed-method or longitudinal research designs to gain deeper insights into how teacher trainees' attitudes toward E-learning evolve over time and the factors influencing these changes.

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