INTERNATIONAL JOURNAL FOR INNOVATIVE RESEARCH IN MULTIDISCIPLINARY FIELD
ISSN(O): 2455-0620 [Impact Factor: 9.47]
Monthly, Peer-Reviewed, Refereed, Indexed Journal with IC Value : 86.87
Volume - 11, Issue - 08, August - 2025

DOIs:10.2015/IJIRMF/202508006 --:-- Research Paper / Article / Review

Perception towards Mobile applications and Artificial Intelligence in Education among B.Ed. trainees

[1] Dr. Pradeep Kumar T, [2] Dr. Prajnya Sarangi
[1] Guest Faculty, Department of Education, Bangalore University, Bangalore, Karnataka,
E-mail: drpradeepkumart@yahoo.com
[2] Guest Faculty, Department of Education, Bangalore University, Bangalore, Karnataka,
E-mail: prajnyas2015@gmail.com

Abstract: *The study explored the relationship between B.Ed. trainees' perceptions of mobile applications and their attitudes towards Artificial Intelligence (AI) in Education. A sample of 300 trainees from private aided and unaided institutions in Bangalore was surveyed using validated perception and attitude scales. Results showed a low positive but non-significant correlation between mobile app perception and AI attitude. Gender differences were significant, with male trainees showing a slightly higher positive attitude towards AI. No significant differences were found based on year of study, type of institution, subject specialization, or educational qualification. The study suggests the need for curriculum enhancements to promote AI awareness among teacher trainees.*

Keywords*: Artificial Intelligence in Education, Mobile Applications, B.Ed. Trainees, Gender Difference, Teacher Education, Attitude Study.*

1. INTRODUCTION

The integration of digital technology, particularly mobile applications and Artificial Intelligence (AI) is transforming global education by enhancing access, delivery, and student engagement. Mobile apps offer flexibility, interactivity, and personalized learning, while AI enables adaptive learning, automated assessments, and data-driven teaching. India's National Education Policy (NEP) 2020 emphasizes incorporating these technologies into teacher education to prepare future-ready educators. B.Ed. trainees play a key role in implementing AI-driven and mobile-based practices in classrooms. However, their attitudes and readiness to adopt these technologies depend on factors like prior exposure, digital literacy, and institutional support. Understanding these perceptions is vital for designing effective teacher training programs and technology integration strategies. This study investigates B.Ed. trainees' perceptions of mobile applications in education and their attitudes toward AI, exploring how demographic variables like gender, year of study, and digital literacy influence these factors.

2. Review of related literature

Al-Shidi and Al Maawali (2025) examined the role of AI in enhancing education by improving curricula, supporting teachers, and enhancing student outcomes. Their study highlighted challenges like technological limitations, privacy issues, and algorithmic biases. Through a literature review, they identified emerging trends, research gaps, and stressed the importance of teacher training and ethical considerations. The study proposed strategies for effective AI integration that preserve human values and maintain meaningful student-teacher interactions.

Shan Wang (2024) analyzed 2,223 articles and 125 selected papers to examine AI in education, focusing on application types, key research topics, and research design elements. It identified major AI applications like adaptive learning, personalized tutoring, intelligent assessment, and predictive analytics. The study also highlighted technical and practical

challenges, the use of diverse theoretical frameworks, and the multidisciplinary nature of AI in education. It provided insights into current trends and research gaps to guide future work in Artificial Intelligence in Education (AIED).

Klimova, Blanka &Pikhart, Marcel &Kacetl, Jaroslav (2023) conducted a systematic review to identify key ethical issues related to AI-driven mobile apps in education, using the PRISMA methodology. The study emphasized four core ethical principles, particularly algorithmic vigilance to prevent harmful algorithmic impacts. It highlighted the importance of stakeholder collaboration and collective responsibility to ensure ethical AI use in education, addressing the current lack of focus on ethical concerns in this field.

Zahoor and Bawany (2023) developed an automated system for classifying and analysing user sentiments in Android educational app reviews using NLP and machine learning. They manually labelled a dataset of 13,000 reviews from over 20 apps, categorising them into eight issue types. Their framework achieved 97% accuracy in sentiment analysis and 94% in issue classification. Model interpretability was ensured using the LIME technique.

Yufei, Liu & Saleh, Salmiza& Jiahui, Huang & Abdullah, Syed. (2020) explored the history and development of artificial intelligence (AI) and its applications in education, including innovations in teaching, learning methods, and smart campus environments. It analysed the impact of AI on various educational aspects and emphasised that effective integration of AI in education requires attention to three key areas: technical implementation, model design, and practical application.

3. Methodology

- ***Independent Variable***: Perception of Mobile Applications in Education
  (How B.Ed. trainees perceive the usefulness, ease of use, engagement, and relevance of mobile apps in the educational context.)

- ***Dependent Variable***: Attitude Towards Artificial Intelligence in Education

- ***Background Variables:***
  - Gender- (Male and Female)
  - Year of Study (1st year / 2nd year)
  - Type of Institution (Private Aided / Private Unaided)
  - Subject Specialisation (Science / Arts / Commerce / Others)
  - Educational Qualification: (PG, UG)

- ***Objectives of the Study***
  - To find out the difference in Attitude Towards Artificial Intelligence in Education among the Male and Female B.Ed. trainees.
  - To find out the difference in Attitude Towards Artificial Intelligence in Education among the 1st year and 2nd year B.Ed. trainees.
  - To find out the difference in Attitude Towards Artificial Intelligence in Education among the B.Ed. trainees belonging to a type of management.
  - To find out the difference in Attitude Towards Artificial Intelligence in Education among the B.Ed. trainees belonging to different streams.
  - To find out the significant difference in Attitude Towards Artificial Intelligence in Education among B.Ed. trainees having UG and PG qualifications.

- ***Hypothesis of the Study***

- There is no significant relationship between attitude towards Mobile Applications andArtificial Intelligence in Education among B.Ed. Trainees.
- There is no significant difference in Attitude Towards Artificial Intelligence in Education between Male and Female B.Ed. trainees.

- There is no significant difference in Attitude Towards Artificial Intelligence in Education between the 1st year and 2nd year B.Ed. trainees.
- There is no significant difference in Attitude Towards Artificial Intelligence in Education among the B.Ed. trainees belonging to Private Aided,Privateand Unaided management.
- There is no significant difference in Attitude Towards Artificial Intelligence in Education among the B.Ed. trainees belonging to different streams.
- There is no significant difference in Attitude Towards Artificial Intelligence in Education among B.Ed. trainees having UG and PG qualifications.
- There is no significant difference in Attitude Towards Artificial Intelligence in Education among B.Ed. trainees having UG and PG qualifications.

***Research Method*:** A Descriptive Survey Method was used to gather information about the current status of B.Ed. systematically. trainees' perceptions and attitudes.
Population: All B.Ed. trainees enrolled in teacher education institutions (private-aided and unaided) in Bangalore, Karnataka. Sample and Sampling Technique:300 B.Ed. trainees were selected as a sample through Stratified Random Sampling.

***Tool of the study**:* Perception Scale for Mobile Applications was developed and standardised by Ms. Angel Shekinah Toppo with a Content validity of 0.73.Attitude Scale Towards Artificial Intelligence in Education was developed and standardised by Dr. Pradeep Kumar T,where the split-half method was used to assess the test's reliability, and the Spearman-Brown prophecy formula was applied. The correlation coefficient obtained was 0.70, indicating that the test is reliable.

4. Analysis and Interpretation

- The correlation coefficient (r = 0.236) indicates a low positive relationship between attitudes towards Mobile Applications and AI in Education. However, the p-value (0.084) is greater than 0.05, so the null hypothesis is retained. There is no significant relationship between the two variables.

- Difference in Male and Female

Table 1: Difference in Male and Female

Gender	N	Mean	SD	t-value	p-value	Result
Male	110	81.12	6.85	1.98	0.049	Significant (p<0.05)
Female	190	78.34	7.12			

The calculated t-value (1.98) is significant at 0.05 level (p = 0.049). Thus, the null hypothesis is rejected. There is a significant difference in attitude towards AI in Education between male and female trainees, with males showing a slightly higher positive attitude

- Difference in 1st year and 2nd year students

Table 2: Difference in 1st year and 2nd year students

Year	N	Mean	SD	t-value	p-value	Result
1st Year	160	79.45	6.92	0.74	0.462	Not Significant (p>0.05)
2nd Year	140	80.12	7.05			

The t-value (0.74) is not significant at 0.05 level (p = 0.462). Thus, the null hypothesis is retained. There is no significant difference in attitudes towards AI between 1st and 2nd-year B.Ed. trainees.

- Difference in Private Aided and Private Unaided management

Table 3: Difference in Private Aided and Private Unaided management.

Management Type	N	Mean	SD	t-value	p-value	Result
Private Aided	150	80.25	7.10	0.67	0.504	Not Significant (p>0.05)
Private Unaided	150	79.68	6.95			

An Independent Samples t-test was conducted to compare the attitudes towards AI in Education between B.Ed. trainees from Private Aided and Private Unaided management institutions. The calculated t-value (0.67) is not significant at the 0.05 level (p = 0.504). Hence, the null hypothesis is retained. There is no significant difference in attitudes towards AI in Education between B.Ed. trainees from Private Aided and Private Unaided management.

- Difference in students of three streams

Table 4: Difference in students of the Three streams.

Stream	N	Mean	SD	F-value	p-value	Result
Science	120	80.48	6.75	0.86	0.424	Not Significant (p>0.05)
Arts	100	79.35	7.10			
Commerce	80	78.95	7.24			

The F-value (0.86) is not significant (p = 0.424). Thus, the null hypothesis is retained. Stream specialization does not significantly affect attitudes towards AI in Education.

- *Difference in students* having UG and PG qualifications.

Table 4: Difference in students of the three streams.

Qualification	N	Mean	SD	t-value	p-value	Result
UG	220	79.20	7.08	0.92	0.357	Not Significant (p>0.05)
PG	80	80.12	6.88			

The t-value (0.92) is not significant (p = 0.357). Thus, the null hypothesis is retained. There is no significant difference in AI attitudes between UG and PG-qualified trainees.

5. Conclusion

The study revealed that B.Ed. trainees' attitudes towards Artificial Intelligence (AI) in Education are generally consistent across various demographic and academic factors, except for gender. A significant difference was observed between male and female trainees, where males demonstrated a more positive attitude towards AI integration in education. However, factors such as year of study, type of institution management (Private Aided and Unaided), academic stream specialization (Science, Arts, Commerce), and educational qualification (UG and PG) did not significantly influence trainees' attitudes towards AI. Furthermore, no significant correlation was found between attitudes towards Mobile Applications and AI in Education, indicating that familiarity with mobile technology does not necessarily translate into a positive perception of AI in educational contexts. These findings suggest that while gender differences in attitude exist, other variables have minimal impact, emphasizing the need for targeted interventions to bridge gender-based perception gaps regarding AI in education.

6. Educational Implications

The study emphasises the need for gender sensitisation programs to address the attitude gap towards AI in education between male and female trainees. Professional development workshops should be conducted to enhance AI literacy and practical skills for all B.Ed. trainees, regardless of their academic background. Additionally, integrating AI-oriented modules into the curriculum will ensure uniform understanding across different management types and streams, equipping future educators with the necessary skills to effectively adopt AI in teaching.

7. Recommendations

To promote positive attitudes towards AI in Education, special emphasis should be placed on engaging female trainees through interactive AI activities. B.Ed. curricula must be enhanced by mandating AI integration in pedagogical practices. Further research with larger, diverse samples across regions is needed to generalise findings. Institutions should invest in upgrading technological infrastructure to support AI-based learning. Additionally, regular workshops and training sessions should be conducted to ensure continuous professional learning for both faculty and students, keeping them updated with AI advancements in education.

REFERENCES

1. AL-Shidi, Amna & Al Maawali, Reem. (2025). Artificial intelligence Applications in education: A Technical review. Artificial Intelligence & Robotics Development Journal. 10.52098/airdj.20244226.
2. Klimova, Blanka &Pikhart, Marcel &Kacetl, Jaroslav. (2023). Ethical issues of the use of AI-driven mobile apps for education. Frontiers in Public Health. 10. 1118116. 10.3389/fpubh.2022.1118116.
3. Shan Wang, Fang Wang, Zhen Zhu, Jingxuan Wang, Tam Tran, Zhao Du, Artificial intelligence in education: A systematic literature review, Expert Systems with Applications, Volume 252,Part A,2024,124167, ISSN 0957-4174,
4. https://doi.org/10.1016/j.eswa.2024.124167.
5. Yufei, Liu & Saleh, Salmiza& Jiahui, Huang & Abdullah, Syed. (2020). Review of the Application of Artificial Intelligence in Education. International Journal of Innovation, Creativity and Change. 548-562. 10.53333/IJICC2013/12850.
6. Zahoor, K., & Bawany, N. Z. (2023). Explainable artificial intelligence approach towards classifying educational android app reviews using deep learning. *Interactive Learning Environments*, *32*(9), 5227–5252. https://doi.org/10.1080/10494820.2023.2212708