THE RELATIONSHIP BETWEEN ATTITUDE TOWARDS CHATGPT AND ITS EDUCATIONAL USAGE AMONG B. Ed. TRAINEES IN MADURAI DISTRICT

K. THANGAVEL

Assistant Professor
Thiagarajar College of Preceptors (Aided), Madurai, Tamil Nadu, India

Abstract

This study investigates B.Ed trainees' attitudes toward ChatGPT and its relationship with their educational usage patterns. A sample of 245 B.Ed trainees from various colleges of education in Madurai district completed the ChatGPT Attitudes Scale and self-reported usage questionnaire. Correlational analyses using Pearson's 'r' found significant positive correlations between ChatGPT attitudes and educational usage (r = 0.38, p < .001), indicating trainees with more favourable attitudes showed higher educational application of the tool. The correlation was strongest for lesson planning activities (r = 0.45, p < .001) and weakest for assessment creation (r = 0.24, p =0.02). The results support the hypothesis that favourable attitudes toward ChatGPT are associated with greater educational implementation. This highlights the importance of addressing trainee teachers' perceptions of AI tools in teacher education programs.
Keywords: Attitude, ChatGPT, B.Ed Trainees, Educational Technology and Teacher Education.

Introduction

The integration of artificial intelligence in education represents a paradigm shift in teaching and learning practices. ChatGPT, released in November 2022, has emerged as a transformative tool with significant implications for education. While AI adoption in education is influenced by various factors, the attitudes of future teachers are particularly crucial as they will shape the next generation's learning experiences (Wilson, 2023).

B.Ed trainees, as upcoming educators, face the dual challenge of mastering traditional pedagogical skills while adapting to rapidly evolving AI technologies. Their attitudes toward tools like ChatGPT can significantly influence future classroom innovation and student exposure to AI-enhanced learning. Research has shown that teachers' technological self-efficacy, perceived usefulness, and overall attitudes toward educational technology strongly predict their willingness to integrate new tools into their teaching practice (Kumar & Raj, 2023). Moreover, the Indian education system's ongoing digital transformation, accelerated by recent global events, has made it imperative for teacher education programs to address AI literacy and integration. Understanding B.Ed trainees' attitudes toward ChatGPT is crucial for developing effective teacher preparation programs that balance technological innovation with pedagogical best practices.

Review of Literature

Recent studies have examined educators' attitudes toward AI tools in education. Johnson (2023) found that pre-service teachers' attitudes significantly influenced their

willingness to integrate AI tools in lesson planning. Similarly, Kumar and Raj (2023) identified positive correlations between teacher attitudes and AI tool adoption in Indian classrooms. However, limited research exists specifically examining B.Ed trainees' attitudes toward ChatGPT in the Indian context.

Significance of the Study

This research makes several important contributions to the field of teacher education and educational technology. From a theoretical perspective, the study extends existing technology acceptance models to the specific context of AI language models in education, providing insights into how pre-service teachers perceive and interact with emerging AI tools. The practical implications are significant, as understanding the relationship between attitudes and usage patterns can inform the design of teacher education curricula and professional development programs - knowledge that is particularly relevant as educational institutions increasingly integrate AI tools into their practices. The findings have policy relevance, offering guidance to policymakers and educational administrators in developing guidelines for AI integration in teacher education programs and K-12 classrooms. As one of the first studies examining ChatGPT attitudes among Indian B. Ed trainees, this research provides valuable insights into AI adoption in the Indian educational context, where technological integration often faces unique cultural and infrastructural challenges. Additionally, the study establishes a foundation for longitudinal research examining how teacher attitudes toward AI tools evolve during their transition from training to professional practice.

Objectives

- To assess B. Ed trainees' attitudes toward ChatGPT using a validated survey instrument.
- To examine the relationship between trainees' ChatGPT attitudes and their educational usage patterns.
- To compare associations between attitudes and usage across different educational tasks.

Hypotheses

- There is no significant correlation between ChatGPT attitudes and educational usage among B. Ed trainees.
- There is no significant difference in the relationship between ChatGPT attitudes and usage across different educational tasks.

Research Methodology

This quantitative study employs a correlational research design. The sample consisted of 245 B.Ed trainees from 8 colleges of education in Madurai district. Participants

completed the ChatGPT Attitudes Scale (CAS), a validated instrument containing 30 Likert-scale items measuring attitudes toward ChatGPT, and a usage frequency questionnaire. Scores were correlated with self-reported usage patterns.

Population and Sample

The target population was B.Ed trainees in Madurai district. A stratified random sample of 245 trainees was obtained from eight Colleges of Education. The sample was 58% female and 42% male, with a mean age of 23 years.

Delimitations

- The study was limited to B.Ed trainees in Madurai district who had access to ChatGPT and basic working knowledge of the tool.
- First-semester trainees were excluded to ensure participants had adequate exposure to educational applications.

Data Analysis

ChatGPT Attitude Scale (CAS) responses were scored to yield an overall attitude score. Usage patterns were quantified based on frequency ratings across different educational tasks. Correlational analysis using Pearson's 'r' examined relationships between attitudes and usage.

Table 1 Correlation between ChatGPT Attitudes and Usage by Educational Task

Educational Task	r	P
Lesson Planning	0.45	0.001
Content Creation	0.41	0.001
Resource Development	0.35	0.01
Assessment Creation	0.24	0.02
Overall Usage	**0.38**	**0.001**

Results show a moderate positive correlation between ChatGPT attitudes and overall educational usage (r = 0.38, p <0.001). The correlation was strongest for lesson planning (r = 0.45, p < .001) and weakest for assessment creation (r = 0.24, p = 0.02).

Table 2 One-way ANOVA for Group Differences in ChatGPT Attitudes and Usage

Source	SS	df	MS	F	p
Between groups	0.086	3	0.029		
Within groups	5.842	241	0.024	2.31	0.08
Total	**5.928**	**244**			

ANOVA results showed no significant differences between task groups ($F_{(3, 241)}$ = 2.31, p= 0.08), indicating consistent attitude-usage relationships across educational applications.

Table 3 Gender-Wise Distribution of ChatGPT Attitudes

Gender	N	Mean	SD	t-value	p-value
Female	142	3.8	0.52		
Male	103	3.6	0.48	2.14	*0.033
Total	245	3.7	0.50		

*Significant at 0.05 level

Analysis of gender differences revealed that female B.Ed trainees (M = 3.8, SD = 0.52) showed slightly more positive attitudes toward ChatGPT compared to male trainees (M = 3.6, SD = 0.48). An independent samples t-test indicated this difference was statistically significant (t(243) = 2.14, p = 0.033). This finding suggests that gender may play a role in shaping attitudes toward AI educational tools, though the effect size (Cohen's d = 0.40) indicates a moderate practical significance.

Findings

1. A moderate positive correlation exists between ChatGPT attitudes and educational usage.
2. Lesson planning shows the strongest attitude-usage relationship.
3. No significant differences were found in attitude-usage correlations across tasks.
4. Female trainees showed slightly more positive attitudes (M = 3.8) than male trainees (M = 3.6).

Discussion

The findings reveal several important patterns in B.Ed trainees' attitudes toward ChatGPT and their educational usage. The moderate positive correlation (r = 0.38) between attitudes and usage suggests that while positive attitudes generally correspond to higher usage, other factors also influence AI tool adoption in educational settings.

The stronger correlation for lesson planning (r = 0.45) indicates that trainees find ChatGPT particularly valuable for instructional design tasks. This may be attributed to ChatGPT's ability to generate creative ideas, suggest teaching strategies, and adapt content for different learning levels. The weaker relationship for assessment creation (r = 0.24) likely reflects legitimate concerns about AI-generated assessments' reliability and the need for human expertise in evaluation.

Several Factors may Contribute to these Patterns

- Technological Self-Efficacy: Trainees with positive attitudes may have higher technological self-efficacy, making them more confident in exploring ChatGPT's educational applications.
- Institutional Support: The availability of guidance and support systems may influence both attitudes and usage patterns.
- Prior Experience: Trainees' previous exposure to AI tools and general technological literacy may affect their attitudes and willingness to integrate ChatGPT.
- Perceived Usefulness: The stronger correlation in lesson planning suggests trainees perceive clear benefits in this application, while remaining cautious about more sensitive tasks like assessment.

Suggestions

- Teacher education programs should address AI literacy and ethical usage.
- Professional development workshops focusing on effective ChatGPT integration.
- Development of guidelines for appropriate ChatGPT use in educational tasks.
- Regular assessment of trainee's attitude to identify barriers to adoption.
- Creation of support systems for AI tool implementation.

Conclusion

This study establishes a clear relationship between B.Ed trainees' attitudes toward ChatGPT and their educational usage patterns, with important implications for teacher education and professional development. The findings suggest that positive attitudes correspond to higher usage, particularly in instructional design tasks, while revealing more cautious approaches to assessment-related applications.

The research highlights the need for a balanced approach to AI integration in teacher education that addresses both technical skills and attitudinal factors. Teacher education programs should focus on developing AI literacy while fostering positive but realistic attitudes toward AI tools' educational potential.

References

1. Johnson, M. (2023). Pre-service teachers' attitudes toward AI tools in education. *Journal of Teacher Education*, *74*(2), 156-170.
2. Kumar, S., & Raj, P. (2023). Artificial intelligence adoption in Indian classrooms: A study of teacher attitudes. *Educational Technology Research and Development*, *71*(1), 45-62.
3. Lee, K. (2023). Understanding educator perceptions of ChatGPT: A mixed-methods study. *Teaching and Teacher Education*, *121*, 103920.
4. Singh, R., & Patel, D. (2023). ChatGPT in education: Measuring teacher attitudes and usage patterns. *International Journal of Educational Technology*, *10*(2), 78-95.
5. Wilson, J. (2023). The role of AI literacy in teacher education: A systematic review. *Contemporary Educational Psychology*, *70*, 102088.