



ATTITUDE AND ARTIFICIAL INTELLIGENCE LITERACY AS PREDICTORS OF INTENTION TO USE AI TOOLS FOR LEARNING AMONG B.Ed. STUDENTS

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Abstract

The study is attempted to find out Attitude toward AI Tools and Artificial Literacy (AI) as predictors of Intention to Use AI Tools for Learning among B.Ed. students using a sample of 300-B.Ed. students from Colleges of Education in Thoothukudi District. Statistical techniques of Percentage analysis and Multiple Regression analysis were used to examine the predictive power of these factors. The results showed that neither Attitude toward AI Tools nor Artificial Intelligence Literacy significantly predicted students' Intention to Use AI Tools for learning activities. These findings highlight the need for further exploration of additional factors that may influence AI adoption in educational contexts and suggest that positive disposition and AI Literacy alone may not be sufficient to drive behavioural intention.

Key Words: Artificial Intelligence Tools, Artificial Literacy, Multiple Regression Analysis, Predictors and Behavioural intention

Introduction

A more recent technological development is the emergence of the term artificial intelligence which is abbreviated as AI (artificial intelligence) which is currently starting to steal attention as a tool to act like humans. An AI tool is a software application that uses artificial intelligence algorithms to perform specific tasks and solve problems and can be used in a variety of industries, from healthcare and finance to marketing and education, to automate tasks, analyze data, and improve decision-making. There are 7-types of Artificial Intelligence and are,

- Narrow AI or Artificial Narrow Intelligence (ANI)
- General AI or Artificial General Intelligence (AGI)
- Super AI or Artificial Super Intelligence (ASI)

- Reactive Machines
- Limited Memory
- Theory of Mind
- Self-aware.

Artificial intelligence (AI) is increasingly integrated into the educational landscape, offering novel tools for personalized learning, assessment, and administrative efficiency. Despite growing availability, effective adoption of AI tools depends not only on access but also on users' attitudes and competencies. Attitude toward AI reflects the individual's feelings and predispositions about using these technologies, while AI literacy encompasses the knowledge and skills necessary for effective interaction with AI tools. Understanding how these factors influence the intention to use AI in learning environments is critical for successful implementation and maximizing educational benefits.

Rationale of the Study

The rationale for this study stems from the recognition that AI technologies hold great promise in transforming education but require user acceptance to realize their potential. Previous research has underscored the role of attitudes and literacy in technology adoption; however, their specific impact on AI tool usage within teacher education remains underexplored. By examining the influence of AI Attitude and AI Literacy on the behavioral Intention to Use AI Tools among prospective teachers, this study aims to identify key barriers and enablers of AI integration. The findings contribute to designing interventions and training programs that facilitate AI adoption in educational settings. Hence the present study entitles as, "Attitude and Artificial Intelligence Literacy as Predictors of Intention to Use AI Tools for Learning among B.Ed. Students".

Review of Related Studies

Indian Studies

Avantika Tomar et al. (2025). Studied on "Future-ready campuses: Unlocking the power of AI in higher education". The study showed that 51% of faculty viewed AI's impact on student learning positively even though only 7% are expert users. AI tools like ChatGPT were rated highly relevant for teaching, with increasing AI use expected in curriculum and research. Challenges of AI use were ethical concerns, accuracy of AI outputs and lack of policies.

Souvik Paul, Dr. Biswajit Chatterjee. (2024). Studied on, "Attitude of B.Ed. Trainees towards Artificial Intelligence and Academic Integrity". This study showed that B.Ed. trainees in India generally hold a moderate attitude toward AI and academic integrity. Significant difference was observed between rural and urban trainees' attitudes, with rural trainees being slightly more positive. Trainees recognized AI's potential to enrich learning but expressed concerns about academic integrity related to the use of AI tools.

Digital Education Council. (2023). Studied on, "AI Governance and Student Perspectives: Democratising Higher Education through Technology". The study reported that 57% of Indian Higher Education Institutions having AI policies with 86% student usage. AI is embedded across teaching, learning, assessment, and research. The study has emphasized the need for ethical AI governance, faculty up skilling, and integration aligned with national goals.

Foreign Studies

Othman, M.A., & Yusof, Z.M. (2024). Studied on, “Factors Influencing Students’ Adoption of AI Research Tools”. The study found that perceived usefulness and social influence as critical predictors of AI tool adoption. Also the study revealed that facilitating conditions like institutional support and resources were necessary for sustained use.

Lee, J., & Kim, S. (2025). Studied on “Exploring Students’ Attitudes Toward Artificial Intelligence (AI)”. The findings of the study revealed that Positive attitudes increased intention to use and engage with AI tools. Negative attitudes, such as distrust or anxiety, decreased intention and usage.

Sirin, H., & Topuz, B. (2025). Studied on, “The Influence of AI Literacy, Subjective Norm, Attitude Toward Using AI, and Behavioral Intention of University Students”. The study demonstrated AI literacy as a key factor that strengthens positive attitudes toward AI. The study identified that higher AI literacy correlated with greater intention to adopt and use AI in educational settings.

Objectives of the Study

The objectives of the present study are,

1. To assess the level of Attitude towards AI Tools among B.Ed. Students.
2. To assess the level of AI Literacy among B.Ed. Students.
3. To assess the level of Intention to Use AI Tools among B.Ed. Students.
4. To find out whether there is any significant influence of Attitude towards AI Tools and AI Literacy on Intention to use AI Tools for Learning among B.Ed. Students.

Hypotheses of the Study

The hypotheses of the study are,

1. The level of Attitude towards AI Tools among B.Ed. Students is moderate.
2. The level of AI Literacy among B.Ed. Students is moderate.
3. The level of Intention to Use AI Tools among B.Ed. Students is moderate.
4. There is no significant influence of Attitude towards AI tools and AI Literacy on Intention to use AI Tools for Learning among B.Ed. Students.

Methodology

Methodology outlines the research design, Population, Sample, Tools used and statistical techniques applied in the present study.

Method Used in the Study

This study employed normative Survey Method and quantitative research design using Multiple Regression analysis to examine the predictive relationship between Attitude toward AI Tools, AI Literacy and the Intention to Use AI Tools for Learning. The study was carried out in the year 2024.

Population of the Study

The population of the study consisted of students studying B.Ed. in Colleges of Education.

Sample of the Study

A Simple random sampling technique was used to pick a sample of 300 B.Ed. students from Aided and Self-financing Colleges of Education in Thoothukudi District.

Tools Used

The investigator used the following Self-constructed tools for the present study:

1. Data Profile of the Sample.
2. Scale of Attitude toward AI Tools to measure positive or negative dispositions toward AI Tools
3. AI literacy Questionnaire to assess knowledge and skills related to AI Tools.
4. Intention to Use AI Tools Questionnaire to assess the willingness of the B.Ed. students to adopt AI tools in their learning activities.

The Content Validity of the tools were established by subjecting the tools to expert review. The reliability of the tools were established by Split-half method and the reliability coefficient was found to be 0.82 for Scale of Attitude toward AI Tools, 0.74 for AI literacy Questionnaire and 0.70 for Intention to Use AI Tools Questionnaire.

Statistical Techniques Applied

The investigator used Percentage Analysis to assess the level of Attitude toward AI Tools, level of AI Literacy and level of Intention to Use AI Tools for Learning. Multiple regression analysis was used to determine Attitude and AI Literacy as predictors of Intention to Use AI Tools. Model summary, Regression ANOVA, and Regression Coefficients were interpreted to assess statistical significance and effect sizes.

Analysis and Interpretation of the Collected Data

Hypothesis 1: The level of Attitude toward AI Tools among B.Ed. Students is moderate.

Table 1
Level of Attitude toward AI Tools among B.Ed. Students

Variable	Category	Frequency	Percentage
Attitude toward AI Tools	Low	56	18.67
	Moderate	160	53.33
	High	84	28.00

It is inferred from table (1) that, 18.67%, 53.33% and 20.00% have come under the category of Low, Moderate and High level of Attitude toward AI Tools. It is referred from the above table that more number of students lie in the category of moderate (53.33%). Therefore, the empirical hypothesis is accepted. It showed that, the level of Attitude toward AI Tools among B.Ed. students is moderate.

Hypothesis 2: The level of AI Literacy among B.Ed. Students is moderate.

.Table 2
Level of AI Literacy among B.Ed. Students

.Variable	Category	Frequency	Percentage
AI Literacy	Low	40	13.3
	Moderate	208	69.3
	High	52	17.3

It is inferred from table (2) that, 13.3%, 69.3% and 17.3% have come under the category of Low, Moderate and High level of AI Literacy. It is referred from the above table that more number of students lie in the category of moderate (69.3%). Therefore, the empirical hypothesis is accepted. It showed that, the level of AI Literacy among B.Ed. students is moderate.

Hypothesis 3: The level of Intention to Use AI Tools among B.Ed. Students is moderate.

.Table 3
Level of Intention to Use AI Tools among B.Ed. Students

Variable	Category	Frequency	Percentage
Intention to Use AI Tools	Low	51	17.0
	Moderate	188	62.7
	High	61	20.3

It is inferred from table (3) that, 17.0%, 62.7% and 20.3% have come under the category of Low, Moderate and High level of Intention to Use AI Tools. It is referred from the above table that more number of students lie in the category of moderate (62.7%). Therefore, the empirical hypothesis is accepted. It showed that, the level of Intention to Use AI Tools among B.Ed. students is moderate.

Hypothesis 4: There is no significant influence of Attitude towards AI Tools and AI Literacy on Intention to Use AI Tools for Learning.

Table 4
Significant Influence of Attitude towards AI Tools and AI Literacy on
Intention to Use AI Tools for Learning
Model Summary

Model	R	R ²	Adjusted R ²	Std. Error of the estimates
1	0.10a	0.01	0.00	0.78

It is inferred from table (4) that, the R value (R=0.10) indicated a very weak positive relationship between the predictors Attitude toward AI Tools and AI Literacy. Also, the value R² (R²=0.01) indicated that only 1% of the variance in Intention to Use AI Tools is accounted for by the predictors and revealed that the model explains very little of the outcome's variability.

Table 4.1
Regression ANOVA

Model	Regression	Sum of squares	df	Mean Square	F	S
1	Regression	1.80	2	0.90	1.28	0.280
	Residual	208.00	297	0.70		
	Total	209.80	299			

Dependent Variable (Outcome Variable): Intention to Use AI Tools for Learning

Predictors (Independent Variables): (Constant), Attitude toward AI Tools and AI Literacy

It is inferred from the table (4.1) that, the ANOVA showed an F-value (1.28) with p-value (0.280), indicating that the regression model (Attitude toward AI Tools and AI Literacy) does not significantly predict the Intention to Use AI tools.

Table 4.2
Regression Coefficients

Model	Un Standardized coefficients		Standardized Coefficients	Effect Size	t	S
	B	Std. Error	Beta			
(Constant)	1.15	0.30	-	-	3.83	< 0.001
Attitude towards AI Tools	0.05	0.07	0.08	0.002	0.71	0.478
AI Literacy	0.03	0.06	0.05	0.001	0.50	0.620

Dependent Variable (Outcome Variable): Intention to Use AI Tools for Learning

It is inferred from the table (4.2) that, the constant is statistically significant ($p < .001$), indicating the expected value of intention when predictors are zero. Both Attitude and AI Literacy have non-significant p-values (0.478 and 0.620 respectively), showing no significant influence on Intention to Use AI Tools. Hence they do not significantly predict intention in this sample. Effect sizes (f^2) are very small, reflecting negligible practical influence.

Findings of the Study

The findings of the study are,

1. The level of Attitude towards AI Tools among B.Ed. Students is moderate.
2. The level of AI Literacy among B.Ed. Students is moderate.
3. The level of Intention to Use AI Tools among B.Ed. Students is moderate.
4. There is no significant influence of Attitude towards AI Tools and AI Literacy on Intention to use AI Tools for Learning among B.Ed. Students. The regression model showed that Attitude toward AI Tools and AI Literacy does not significantly predict the Intention to Use AI tools for Learning among B.Ed. Students.

Educational Implications

The findings of the study indicate that to foster constructive attitudes toward AI tools, educators and organizations should emphasize demonstrable usefulness, provide training that builds literacy and confidence, and establish clear, ethical guidelines that address learners' concerns.

Conclusion

Artificial Intelligence (AI) is the process of modelling human thinking and designing a machine so it can behave like humans. In its development, artificial intelligence has also penetrated the world of education. The development of the times requires the world of education to adapt to technological developments to improve the quality of education, especially the adjustment of information and communication technology. Positive Attitude toward AI Tools and AI Literacy is believed to be able to help student teachers learn better

and achieve educational goals more effectively as AI facilitates efficient assessment, feedback delivery, and content adaptation, ensuring that teachers receive tailored support to address their specific needs.

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