Teaching Professionals' Awareness, Perception, Attitude and Readiness towards Artificial Intelligence in Indian Education: A Case of Andhra Pradesh and Telangana

DR. KARUNAKARARAO.RUNJALA, DR. CHAKRAVARTI VENGALASETTI, DR ALANAZI

Abstract: *Artificial Intelligence is a booming field worldwide, and in education it is reshaping the whole system, but in India it is limited by infrastructural constraints, costs, and a cultural reliance on traditional teacher–student relationships. The present study investigates teaching professionals' awareness, perceptions, attitudes, and readiness towards AI in education by using the Theory of Planned Behaviour (Ajzen, 1991) in the Indian regions of Andhra Pradesh and Telangana. 242 teaching professionals' responses were collected, analysed and presented using descriptive statistics, correlation, and regression with the help of SPSS. Results showed moderate awareness regarding AI in everyday life and educational applications. The respondents are more familiar with assessment, grading and administrative support. Positive perceptions were expressed regarding AI's role in communication, individualised learning, and instructional delivery, and they expressed their concerns about privacy, ethics, and teacher–student relationships . There is a positive attitude regarding parent-teacher communication and diagnostic support and cautious optimism regarding readiness and willingness to adopt AI and expressed their worry about job security andcosts. Correlation and regression results confirmed perception as a strong predictor, a positive relationship among awareness, perception, attitude and readiness. The findings revealed that professional development, institutional support and ethical safeguards are vital to AI integration in education as well as to keep traditional pedagogical values, further to offer actionable insights for institutions and policy-makers.*

Keywords: Artificial Intelligence in Education, AI in Indian education, AI in Andhra Pradesh and Telangana education, Teaching Professionals AI Awareness, Teaching Professionals AI Perception, Teaching Professionals AI Attitude, Teaching Professionals AI Readiness, Theory of Planned Behaviour.

Dr. Karunakararao.Runjala, Central University of Andhra Pradesh, India
Dr. Chakravarti Vengalasetti, Associate Professor, School of Business & Management
Chalapathi University, A R NAGAR, Mothadaka, GUNTUR, ANDHRA PRADESH- 522016.
Dr Alanazi, Marfua, Technical and Vocational Training Corporation (TVTC), Saudi Arabia,

Introduction

AI has changed all the fields of human life, i.e., education, medicine, agriculture, industry, whatnot? It benefits in terms of efficiency and convenience, and it has become the dictator of human life by extending human intelligence to assist individuals in tasks across scheduling, learning, fitness, decision-making, etc., but there are red flags regarding ethics, data privacy and the impact on human interaction.

Traditionally, the Indian education system has been rooted in the teacher–student relationship in which the Guru plays a central role in imparting knowledge and clarifying doubts. The adoption of AI in Indian education is challenging this long-standing educational principle and traditional institutions that already offer superior-quality education by traditional methods. Although India has begun embracing AI—evidenced by initiatives such as the establishment of the first AI school in Kerala and adoption by select premier institutions-high costs, infrastructural constraints, and job losses remain major concerns that have limited the implementation of AI in Indian education.

The theory of planned behaviour emphasises the role of attitude in shaping intentions and behaviour. The study examines the relationship among teaching professionals' awareness, perception, attitude and readiness in Andhra Pradesh and Telangana by using a structured survey administered via Google Forms. The research addresses how teaching professionals perceived AI in education and how they prepared for this technological wave.

Review of Literature

Extensive research has been conducted on Artificial Intelligence in education, and scholars are investigating teachers' perceptions, attitudes, and readiness. Aghaziarati, Nejatifar, and Abedi (2023) explored teachers' attitudes towards AI by identifying pedagogical impacts, technological challenges, and ethical and social considerations. They highlighted optimism towards the adoption of AI and concerns about privacy. In the same way, Uygun (2024) stated that individualised learning and productivity can be achieved through AI, but includes privacy risks, ethical dilemmas and emotional detachment. Cojean, Brun, Amadieu, and Dessus (2023) identified qualitative work with reduced workloads due to AI adoption, but ethical concerns are a major threat to the work. Nazaretsky, Cukurova, Ariely, and Alexandron (2021) found that accepting AI-based recommendations is difficult due to contradictions with prior knowledge, bias and unrealistic expectations of AI as infallible.

Intention to teach AI and teachers' readiness is a well-researched topic. Ayanwale et al. (2022) explored that confidence and relevance are the key drivers of intention and readiness. Alnasib (2023) found Saudi faculty are moderately ready due to limited knowledge and stressing more institutional support to adopt AI in education, while Molefi et al. (2024) stressed the same issue in the terms of support and resources. Dorongon and Sarmiento (2025) found that AI adoption and readiness is depends on access to devices, proper training and institutional support. Mujahidah et al. (2025) found more enthusiasm in teachers regarding creativity and problem-solving because of AI. Mayor and Bautista (2025) identified perception and attitude as key

predictors of AI adoptability and readiness. Sarfaraj et al. (2025) recommended policy-level interventions for AI-integrated teaching.

Regarding adoption patterns of AI in education various models were proposed and examined by the researchers. Al Darayseh (2023) found that 70 per cent of behavioural changes in science teaching were driven by ease of use, expected benefits, and attitudes. Qureshi et al. (2025) identified digital literacy as a key driver to adopt AI in education, and they confirmed the validity of the Technology Acceptance Model (TAM) in Pakistan. Chounta et al. (2022), using the FATE framework, found Estonian teachers perceived AI as an opportunity, while Shirin (2022) in Bangladesh saw it as an opportunity to conduct administrative tasks, but with concerns about human involvement. Lindner and Berges (2020) identified low levels of exposure towards AI and underscoring the need for professional development of Computer Science teachers. Yau et al. (2023) identified six conceptions of teaching AI in Hong Kong, ranging from knowledge delivery to the establishment of ethics, offering pathways for teacher education.

Pre-service teachers are a unique subgroup with their own perspective, one of enthusiasm, but limited technical knowledge. According to Pokrivcakova (2023), Slovak pre-service teachers of English as a foreign language (EFL) were largely unaware of AI principles but were supportive of its integration into the educational program. AlKanaan (2022) noted low awareness among pre-service science teachers, and Ghimire, Prather, and Edwards (2024) found that while CS educators were more confident with generative AI tools, they struggled to detect AI-generated work. Studies such as Al Darayseh (2023) and AlKanaan (2022) have consistently highlighted the significance of structured training programs in building pre-service teachers' competence and confidence.

Higher education faculty are tentatively optimistic about barriers related to online literacy and ethics. Arunfred and Marin (2025) explored readiness among management educators. Institutional support was identified as a critical factor in readiness by Mensy Dorongon and Sarmiento (2025), while Alnasib (2023) and Molefi et al. (2024) highlighted the significance of professional development and supportive infrastructure. Perception and adaptability were strong predictors of preparedness according to Mayor & Bautista (2025). Kayıran, Sönmez, Avcı, and Mohamud (2026) studied the perspectives of Turkish teachers, highlighting the psychosocial implications and professional learning needs.

Thus, teachers generally perceive AI is meant for efficiency and creativity, but have concerns about ethics, privacy and autonomy. Institutional support and AI literacy are the major concerns for AI adoption. The literature demonstrates cautious optimism toward AI in education.

Statement of the problem

Artificial Intelligence (AI) in education is extending possibilities for personalised learning, enhanced efficiency and innovative pedagogical practices, but in the Indian education system, the adoption rate is very low due to challenges such as high implementation costs, inadequate infrastructure and limited teacher training. Moreover, depersonalisation of learning and

potential displacement of teachers are the main concerns regarding the traditional teacher-student relationship, which is deeply embedded in Indian cultural and pedagogical values.

In the international context, there are studies available on teachers' perceptions and readiness towards AI, but in the Indian context, state-wise studies, especially in Andhra Pradesh and Telangana, are not available. Teaching professionals in these regions can be considered the backbone of educational services, and are the key stakeholders in determining whether AI can be successfully integrated into classrooms. Teaching professionals' awareness, perceptions, attitudes, and readiness impact AI adoption, and demographic factors, institutional support, and ethical concerns are the intervening variables shaping attitudes. Without a clear understanding of teaching professionals' awareness, perceptions, attitudes, and readiness, the adoption of AI in education may encounter resistance and lead to ineffective implementation.

The present study addresses this gap by exploring how teaching professionals in Andhra Pradesh and Telangana are aware of, how they perceive, and how these factors will help shape attitudes, and how far they are ready to adopt this AI. Attitudes are key drivers of behavioural intentions; the present research will identify challenges and opportunities for incorporating AI into Indian education.

Significance of the Study

The present study will help build theory and practice in the field of educational technology. It extends the theory of planned behaviour (Ajzen, 1991) to the context of AI adoption in education. Further, it fills a regional gap by focusing on teaching professionals across Andhra Pradesh and Telangana. The findings provide insights into the adoption and readiness of teaching professionals in India. Opportunities and challenges will be identified and provide insights for policymakers, institutional leaders, and teacher training programs.

Scope and limitations of the study

The scope of the study is limited to teaching professionals in Telangana and Andhra Pradesh. Data were collected from the 242 respondents through a structured questionnaire consists five key constructs i.e., demographics, general awareness, awareness of AI in education, perceptions, attitudes and readiness.

The study covers only teaching professionals in two states, and does not include other groups such as students, policymakers or institutions. The findings may provide valuable insights, but generalisation to all Indian states may not be applicable.

Conceptual Framework

This study used a modified framework of the theory of planned behaviour. Demographics, awareness, perception, attitude and readiness are the variables used in this study, as shown in Figure 1.

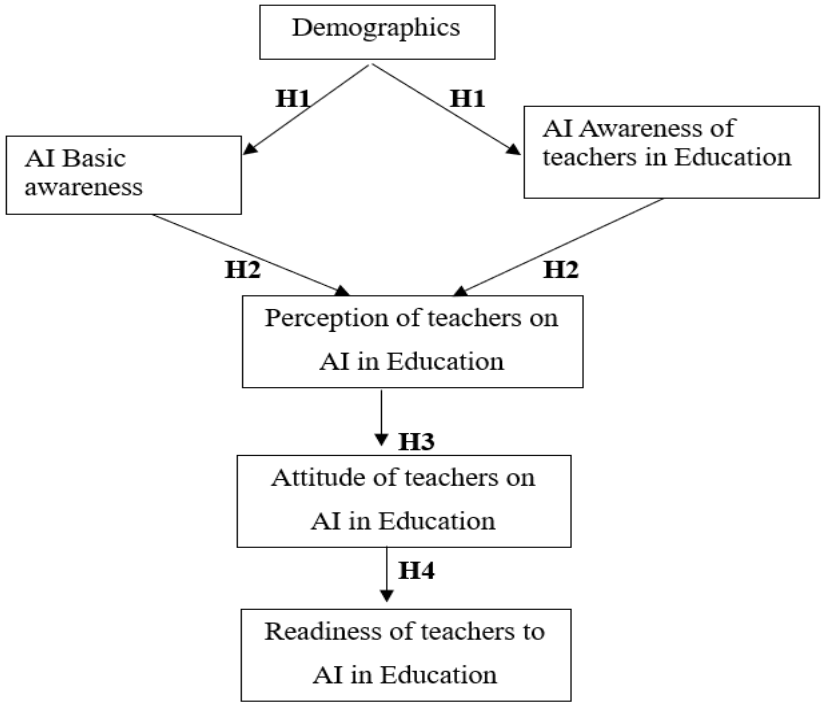


Figure 1: conceptual framework

Hypotheses

H1: Demographic factors have a significant influence on teachers' AI basic awareness and awareness of AI in education.

H2: Awareness significantly affects perceptions of AI in Education

H3: Perceptions of AI in education significantly influence their attitudes toward AI in education.

H4: AI Attitudes significantly determine their readiness to adopt AI in education.

Research Questions

- How do demographics, i.e., Age, Gender, Marital Status, Educational Qualification, Teaching Experience, Level of Teaching, and Field of Teaching influence basic awareness on AI and AI in education?
- How do basic awareness and awareness of AI in education impact the perception of the teaching professionals?
- How perceptions impact teaching professionals' attitudes towards AI in education?
- How will attitudes make teaching professionals get ready for the adoption of AI in education?

Objectives of the study

- To assess the demographic variables of teaching professionals' impact on basic awareness and awareness of AI in education.
- To assess perceptions of teaching professionals on the basis of awareness

- To assess the impact of AI Awareness on teaching professionals' AI attitude
- To assess teaching professionals' readiness to adopt AI in education.

Methodology

This study used the theory of planned behaviour and adopted a quantitative, explanatory survey design. The study population comprises teaching professionals in the states of Andhra Pradesh and Telangana, and a purposive sampling technique was employed. 242 responses were collected via a questionnaire administered through Google Forms. Responses were measured using Likert scales (e.g., "Unaware" to "Extremely Aware," "Very Poor" to "Excellent"), enabling quantification of constructs. Questionnaire validity was tested by using a pilot study, and reliability was confirmed by using Cronbach's alpha. All statistical analyses were conducted using SPSS software.

Ethical statement: The respondents participated voluntarily, consent was taken from the teaching professionals, as the data were used completely for academic purposes and anonymity and confidentiality were assured.

Data Analysis and Results - Descriptive statistics:

Table 1: Demographics of Respondents

	N	Mean	Std. Deviation
Age	242	3.6860	1.53538
Gender	242	1.3554	.47962
Marital Status	242	1.9339	.45976
Educational Qualification	242	2.4132	1.18895
Teaching Experience	242	3.3926	1.47413
Level of Teaching	242	3.3967	1.01833
Field of Teaching	242	2.0496	1.41040

Table 1 presents the demographic profile of the respondents. The mean age (3.69) indicates that the majority of respondents were in the 31-40 years category, and that the majority were male (64.5%). The marital status of the majority of respondents, 78.5 per cent, was married, with a mean of 1.93 (SD = 0.46). The means of the educational qualification, i.e., 2.41 (SD = 1.19), indicates that the majority of the respondents were postgraduates with NET/SET/Eligibility category, though higher qualifications such as PhD and Post-Doctoral were also represented. The average teaching experience was 3.39 (SD = 1.47), indicating that most respondents had 3-10 years of experience. The mean level of teaching was 3.40 (SD = 1.02), indicating that the majority of respondents at the undergraduate level of teaching and in the field of teaching yielded a mean of 2.05 (SD = 1.41), highlighting that the majority were engaged in Economics, Business, and Commerce (55.4%).

Table 2. Basic Awareness of Teachers on Artificial Intelligence

	N	Mean	Std. Deviation

Basic Awareness - Email Spam Identification in your mail box	242	3.7107	1.15545
Basic Awareness - Recommended playlist in your Music Player App	242	3.9339	1.02042
Basic Awareness - Product recommendations in your Shopping App	242	4.0826	1.09003
Basic Awareness - Fitness App in your Mobile Phone and Smart Watch	242	3.7479	1.27149
Basic Awareness - Security Camera's Alarm at your premises	242	3.6364	1.13415

Table 2 presents teaching professionals' basic awareness of AI daily use and reveals moderate to high levels of awareness. Regarding shopping apps and product recommendations, they have the strongest awareness (M = 4.08, SD = 1.09) and music playlists (M = 3.93, SD = 1.02) indicate high familiarity with digital tools. Email spam filters (M = 3.71, SD = 1.16) and fitness apps (M = 3.75, SD = 1.27) also had moderately high awareness, whereas security camera alarms (M = 3.64, SD = 1.13) were relatively lower, suggesting that teachers are less exposed to AI in surveillance systems.

Table 3: Awareness of Teachers on AI in Education

	N	Mean	Std. Deviation
Awareness of Teachers on AI in Education - Teach basic and advanced skills according to needs of the each and every student.	242	3.5000	1.14598
Awareness of Teachers on AI in Education - Assess strengths and weaknesses, specific needs of the students.	242	3.4752	1.18488
Awareness of Teachers on AI in Education - Supports more effective target oriented individualized learning.	242	3.4876	1.14953
Awareness of Teachers on AI in Education - Customized support and Instruction with effective audio-visual communication.	242	3.5744	1.32195
Awareness of Teachers on AI in Education - Prepare Assessment, evaluation and grading.	242	3.8471	1.18312
Awareness of Teachers on AI in Education - Compiling data about student grades and detailed report on each and every student.	242	3.5661	1.24481
Awareness of Teachers on AI in Education - Make parent teacher communication effective.	242	3.4587	1.48308
Awareness of Teachers on AI in Education - Schedule courses and individuals to manage their daily, weekly, monthly or yearly schedules.	242	3.7190	1.06800

Awareness of Teachers on AI in Education - Staff scheduling and substitute management.	242	3.4463	1.20820
Awareness of Teachers on AI in Education - Professional development, Academic writing Plagiarism Detection.	242	3.5620	1.13337
Awareness of Teachers on AI in Education - Enhanced Online Discussion Boards, universal access through Connected Campuses.	242	3.5165	1.10531
Awareness of Teachers on AI in Education - Chatbots for enrollment and retention of students.	242	3.1488	1.07912
Awareness of Teachers on AI in Education - Handle administrative tasks, Budgeting, and financial management enable them to make better informed decisions.	242	3.2231	1.02247
Awareness of Teachers on AI in Education - Effective facilities management, transportation, IT maintenance and cyber security.	242	3.1281	1.17905

Table 3 presents teaching professionals' awareness of AI in education. Teachers were aware of most educational applications of AI, especially in assessment, evaluation, and grading. Course scheduling and compiling students' data and reports were strongly aware, but regarding teaching skills, individualised learning, and audio-visual support, teaching professionals indicated moderate awareness. Chatbots in enrollment and retention (M = 3.15, SD = 1.08), administrative tasks and budgeting (M = 3.22, SD = 1.02), and facilities management and cybersecurity (M = 3.13, SD = 1.18) had relatively low awareness among teaching professionals.

Table 4: Perceptions of teachers on AI in education

	N	Mean	Std. Deviation
Perception of Teachers on AI in Education - Teach basic and advanced skills according to needs of the each and every student.	242	3.8760	1.59132
Perception of Teachers on AI in Education - Assess strengths and weaknesses, specific needs of the students.	242	4.0826	.86025
Perception of Teachers on AI in Education - Supports more effective target oriented individualized learning.	242	4.0826	.86025
Perception of Teachers on AI in Education - Customized support and Instruction with effective audio-visual communication.	242	4.2314	.83254
Perception of Teachers on AI in Education - Prepare Assessment, evaluation and grading.	242	4.0826	.81568
Perception of Teachers on AI in Education - Compiling data about student grades and detailed report on each and every student.	242	4.1942	.86392
Perception of Teachers on AI in Education - Make parent teacher communication effective.	242	4.2686	.88684

Perception of Teachers on AI in Education - Schedule courses and individuals to manage their daily, weekly, monthly or yearly schedules.	242	4.0455	.79547
Perception of Teachers on AI in Education - Staff scheduling and substitute management.	242	4.1198	.91897
Perception of Teachers on AI in Education - Professional development, Academic writing Plagiarism Detection.	242	4.1198	.83374
Perception of Teachers on AI in Education - Enhanced Online Discussion Boards, universal access through Connected Campuses.	242	4.0083	.77294
Perception of Teachers on AI in Education - Chatbots for enrollment and retention of students.	242	3.8223	.67363
Perception of Teachers on AI in Education - Handle administrative tasks, Budgeting, and financial management enable them to make better informed decisions.	242	3.7851	.83697
Perception of Teachers on AI in Education - Effective facilities management, transportation, IT maintenance and cyber security.	242	3.7851	.79110

Table 4 presents means and standard deviations of teaching professionals' perceptions towards AI in education. The strongest perception was for parent-teacher communication(M = 4.27, SD = 0.89), customized support with audio-visual communication (M = 4.23, SD = 0.83), and compiling student data and reports (M = 4.19, SD = 0.86), assessment and grading (M = 4.08, SD = 0.82), individualized learning (M = 4.08, SD = 0.86), and staff scheduling (M = 4.12, SD = 0.92). Lower perceptions were identified for chatbots in enrollment and retention (M = 3.82, SD = 0.67) and administrative tasks such as budgeting and facilities management (M = 3.79, SD = 0.83).

Table 5: Attitudes of Teachers on AI in Education

	N	Mean	Std. Deviation
Attitude of Teachers on AI in Education - Teach basic and advanced skills according to needs of the each and every student.	242	4.3058	.85304
Attitude of Teachers on AI in Education - Assess strengths and weaknesses, specific needs of the students.	242	4.3058	.85304
Attitude of Teachers on AI in Education - Supports more effective target oriented individualized learning.	242	4.2314	.83254
Attitude of Teachers on AI in Education - Customized support and Instruction with effective audio-visual communication.	242	4.1942	.86392
Attitude of Teachers on AI in Education - Prepare Assessment, evaluation and grading.	242	4.2686	.84368
Attitude of Teachers on AI in Education - Compiling data about student grades and detailed report on each and every student.	242	4.1942	.94643

Attitude of Teachers on AI in Education - Make parent teacher communication effective.	242	4.3430	.86070
Attitude of Teachers on AI in Education - Schedule courses and individuals to manage their daily, weekly, monthly or yearly schedules.	242	4.2314	.91788
Attitude of Teachers on AI in Education - Staff scheduling and substitute management.	242	4.2686	.92799
Attitude of Teachers on AI in Education - Professional development, Academic writing Plagiarism Detection.	242	4.2314	.83254
Attitude of Teachers on AI in Education - Enhanced Online Discussion Boards, universal access through Connected Campuses.	242	4.2314	.91788
Attitude of Teachers on AI in Education - Chatbots for enrollment and retention of students.	242	4.1942	.81955
Attitude of Teachers on AI in Education - Handle administrative tasks, Budgeting, and financial management enable them to make better informed decisions.	233	4.2017	.92270
Attitude of Teachers on AI in Education - Effective facilities management, transportation, IT maintenance and cyber security.	234	4.1239	.84763

Table 5 presents teaching professionals' attitudes towards AI in education. High attitudes were observed for parent-teacher communication, assessing student strengths and weaknesses, assessment and grading, individualised learning, professional development, plagiarism detection, online discussion boards, chatbots for enrollment, administrative tasks, budgeting, facilities management and cyber security. Indicates teaching professionals' openness to adopting AI in education.

Table 6: Readiness of Teachers to accept AI in education

	N	Mean	Std. Deviation
Readiness of Teachers to Accept AI in Education - AI affects my job security but still I wanted to adopt it because of its advantages.	242	3.8967	.83596
Readiness of Teachers to Accept AI in Education - AI affects my privacy and security but still I wanted to adopt it because risk is common in every advancement in technology	242	3.7107	.81417
Readiness of Teachers to Accept AI in Education - AI is a costly affair to me but still I wanted to adopt it because of its benefits.	242	3.7107	.71658
Readiness of Teachers to Accept AI in Education - AI weakens human intelligence but still I wanted to adopt it because it will reduce my stress.	242	3.7851	.74239
Readiness of Teachers to Accept AI in Education - AI weakens Human Emotional strength but still I wanted to adopt it because it will make me independent.	242	3.7851	.79110

Readiness of Teachers to Accept AI in Education - AI affects Human relations but still I wanted to adopt it because it is better to me	242	3.7479	.80358

Table 6 presents teaching professionals' readiness towards AI adoption in Education. Teachers were ready to accept challenges in the course of their jobs with technological progress, and they are ready, even though there are concerns about privacy and security. Regarding human intelligence, emotional strength, and human relations, readiness is moderate.

Data analysis and Results - Inferential Statistics & Hypothesis Testing:

Reliability analysis: To test the internal consistency of the data, a reliability analysis was conducted. Cronbach's Alpha for the overall instrument is 0.978, confirming that the questionnaire is highly reliable. The 4 constructs reveal high Cronbach's α, i.e., Awareness (19 items): Cronbach's α = .954, Perception (14 items): Cronbach's α = .942, Attitude (14 items): Cronbach's α = .990 and Readiness (6 items): Cronbach's α = .900, indicating high reliability of the instrument item-wise.

Correlation Analysis:

Table 7 - Correlations

		Awareness	Perception	Attitude	Readiness
Awareness	Pearson Correlation	1	.522**	.483**	.493**
	Sig. (2-tailed)		.000	.000	.000
	N	242	242	242	242
Perception	Pearson Correlation	.522**	1	.885**	.883**
	Sig. (2-tailed)	.000		.000	.000
	N	242	242	242	242
Attitude	Pearson Correlation	.483**	.885**	1	.783**
	Sig. (2-tailed)	.000	.000		.000
	N	242	242	242	242
Readiness	Pearson Correlation	.493**	.883**	.783**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	242	242	242	242

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7 presents correlations for four constructs. High awareness of AI leads to positive perceptions, attitudes, and greater readiness. Stronger attitudes and greater readiness result from stronger perceptions. Greater readiness is solely due to a positive attitude. Thus, these findings support the proposed model and confirm that awareness creates a positive perception, which in turn develops a stronger attitude and greater readiness.

Hypotheses Testing:

Table 8
Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Awareness	Equal variances assumed	.902	.343	-2.680	240	.008	-.30784	.11488	-.53414	-.08154
	Equal variances not assumed			-2.727	184.543	.007	-.30784	.11287	-.53053	-.08516

ANOVA

Awareness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.888	4	2.222	3.062	.017
Within Groups	171.953	237	.726		
Total	180.841	241			

ANOVA

Awareness

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.404	5	1.681	2.300	.046
Within Groups	172.437	236	.731		
Total	180.841	241			

Correlations

		Awareness	Age	Teaching Experience
Awareness	Pearson Correlation	1	.116	.052
	Sig. (2-tailed)		.071	.419
	N	242	242	242

Age	Pearson Correlation	.116	1	.187**
	Sig. (2-tailed)	.071		.004
	N	242	242	242
Teaching Experience	Pearson Correlation	.052	.187**	1
	Sig. (2-tailed)	.419	.004	
	N	242	242	242
**. Correlation is significant at the 0.01 level (2-tailed).				

Table 8 presents an independent samples t test was conducted among demographic variables, the awareness scores of male and female teaching professionals reveal a statistically significant i.e. Levene's test indicated that the assumption of equal variances was met (F = 0.90, p = .34), difference in awareness between the two groups, t(240) = −2.68, p = .008. The mean difference was −0.31 (SE = 0.11), with a 95% confidence interval of −0.53 to −0.08, suggesting that female teachers are more aware of AI in education compared to male teaching professionals. Pearson's correlation analysis result revealed that awareness was not significantly correlated with age (r = .116, p = .071) or teaching experience (r = .052, p = .419), age and teaching experience were positively correlated with each other (r = .187, p = .004), thus age and experience are related, they do not significantly predict awareness, providing only partial support for Hypothesis 1.

Regression Analysis:

Table 9 – Regression analysis – awareness on perception

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	522[a]	273	270	.58324	.273	89.950	1	240	.000

a. Predictors: (Constant), Awareness

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.598	1	30.598	89.950	.000[b]
	Residual	81.640	240	.340		
	Total	112.237	241			

a. Dependent Variable: Perception

b. Predictors: (Constant), Awareness

Coefficients[a]

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	Collinearity Statistics

		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.569	.159		16.140	.000		
	Awareness	.411	.043	.522	9.484	.000	1.000	1.000
a. Dependent Variable: Perception								

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Awareness
1	1	1.972	1.000	.01	.01
	2	.028	8.371	.99	.99
a. Dependent Variable: Perception					

Table 9 presents a simple linear regression result, revealing that awareness significantly, i.e., $F(1, 240) = 89.95$, $p < .001$, with an R^2 value of .273, predicts perception of AI in education. The standardised regression coefficient ($\beta = .522$, $t = 9.48$, $p < .001$) revealed awareness as a positive predictor of perception, and the unstandardized coefficient ($B = .411$, $SE = .043$) indicates that an increase in awareness will enhance perception. Thus with these result H2 was supported.

Table 10 – Regression analysis - Perception on Attitude

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.885[a]	.783	.782	.38600	.783	863.567	1	240	.000
a. Predictors: (Constant), Perception									

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	128.668	1	128.668	863.567	.000[b]
	Residual	35.759	240	.149		
	Total	164.427	241			
a. Dependent Variable: Attitude						
b. Predictors: (Constant), Perception						

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-.080	.149		-.534	.594		
	Perception	1.071	.036	.885	29.387	.000	1.000	1.000

a. Dependent Variable: Attitude					
Collinearity Diagnostics[a]					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Perception
1	1	1.986	1.000	.01	.01
	2	.014	11.937	.99	.99
a. Dependent Variable: Attitude					

Table 10 presents a simple linear regression, and the results revealed a statistically significant relationship between perception and attitude. $F(1, 240) = 863.57$, $p < .001$, with an R^2 value of .783, explains 78 percent of variance in attitude. The standardised regression coefficient ($\beta = .885$, $t = 29.39$, $p < .001$) and the unstandardised coefficient ($B = 1.071$, $SE = .036$) were confirmed as positive predictors, and H3 was supported.

Table 11 – Regression Analysis – Attitude on Readiness

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.783[a]	.613	.611	.39956	.613	380.121	1	240	.000
a. Predictors: (Constant), Attitude									

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60.685	1	60.685	380.121	.000[b]
	Residual	38.315	240	.160		
	Total	99.000	241			
a. Dependent Variable: Readiness						
b. Predictors: (Constant), Attitude						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.196	.135		8.882	.000		
	Attitude	.608	.031	.783	19.497	.000	1.000	1.000
a. Dependent Variable: Readiness								

Collinearity Diagnostics[a]					
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Attitude
1	1	1.982	1.000	.01	.01
	2	.018	10.388	.99	.99

a. Dependent Variable: Readiness

Table 11 presents the regression results of attitude and readiness. Attitude positively predicts readiness; the result was statistically significant, $F(1, 240) = 380.12$, $p < .001$, with an R^2 value of .613, The standardized regression coefficient ($\beta = .783$, $t = 19.50$, $p < .001$), the unstandardized coefficient ($B = .608$, $SE = .031$) explains positivity and level of positivity. Thus, a positive attitude enhances readiness, thereby supporting H4.

Table 12 Result summary for Hypotheses

Hypothesis	Predictor → Outcome	R^2	F(df1, df2)	β (Beta)	t	p	Supported
H2	Awareness → Perception	.273	89.95 (1,240)	.522	9.48	< .001	Yes
H3	Perception → Attitude	.783	863.57 (1,240)	.885	29.39	< .001	Yes
H4	Attitude → Readiness	.613	380.12 (1,240)	.783	19.50	< .001	Yes

Conclusion and Recommendations

This study assesses teaching professionals' awareness, perception, attitude and readiness towards AI in Education. The findings revealed that Awareness of AI moderately influences readiness, and perception and attitude strongly influence AI readiness in education. The regression results confirmed the flow of hypotheses in the adopted model, i.e., Awareness influences perception, perception strongly predicts attitude, and Attitude supports readiness.

Based on the above findings, institutions should focus on conducting seminars and workshops to help teaching professionals adopt AI tools in their work. Further, institutions have to provide them with proper infrastructure. Policymakers and administrative support must address privacy, ethical, and job security issues in their policies. Thus, promoting Human – AI collaboration has to be addressed, as it is not a replacement for human intelligence and has to improve trust and engagement.

References

Abdulla Al Darayseh. (2023). Acceptance of artificial intelligence in teaching science: Science teachers' perspective. *Computers and Education: Artificial Intelligence, 4*, Article 100132. https://doi.org/10.1016/j.caeai.2023.100132

Aghaziarati, A., Nejatifar, S., & Abedi, A. (2023). Artificial intelligence in education: Investigating teacher attitudes. *AI and Tech in Behavioral and Social Sciences, 1*(1), 35–42.

Alnasib, B. N. M. (2023). Factors affecting faculty members' readiness to integrate artificial intelligence into their teaching practices: A study from the Saudi higher education context.

International Journal of Learning, Teaching and Educational Research, 22(8), 465–491. https://doi.org/10.26803/ijlter.22.8.24

Arunfred, N., & Bini Marin, V. (2025). Teacher readiness and perceptions towards AI-based smart teaching tools. *Journal of Ethics in Higher Education, 6*(2), 323–339.

Ayanwale, M. A., Sanusi, I. T., Adelana, O. P., Aruleba, K. D., & Oyelere, S. Sunday. (2022). Teachers' readiness and intention to teach artificial intelligence in schools. *Computers and Education: Artificial Intelligence, 3*, Article 100099. https://doi.org/10.1016/j.caeai.2022.100099

Bezjak, S. (2024). Perceptions and perspectives: Understanding teachers' attitudes towards AI in education. In *MakeLearn 2024: Artificial intelligence for human-technologies-economy sustainable development*. ToKnowPress.

Chounta, I.-A., Bardone, E., Raudsep, A., & Pedaste, M. (2022). Exploring teachers' perceptions of artificial intelligence as a tool to support their practice in Estonian K-12 education. *International Journal of Artificial Intelligence in Education, 32*(3), 725–755. https://doi.org/10.1007/s40593-021-00243-5

Cojean, S., Brun, L., Amadieu, F., & Dessus, P. (2023). Teachers' attitudes towards AI: What is the difference with non-AI technologies? *Proceedings of the Annual Meeting of the Cognitive Science Society, 45*, 1983–1989. https://escholarship.org/uc/item/0r55s1jb

Dorongon, M. A., & Sarmiento, J. R. (2025). Teachers' readiness for artificial intelligence integration in teaching and learning. *Global Scientific Journal, 13*(5). https://www.globalscientificjournal.com/journal_volume13_issue5_May_2025_edition_p3.html

Francisco, I. C. (2025). Teachers' perceptions of learning from, about, and with artificial intelligence in education (AIED): Implications for ethical practice and the challenges of AI use in basic education. *EthAIca, 4*, Article 433. https://doi.org/10.56294/ai2025433

Ghimire, A., Prather, J., & Edwards, J. (2024). *Generative AI in education: A study of educators' awareness, sentiments, and influencing factors* (arXiv:2403.15586). arXiv. https://doi.org/10.48550/arXiv.2403.15586

Güneyli, A., Burgul, N. S., Dericioğlu, S., Cenkova, N., Becan, S., Şimşek, Ş. E., & Güneralp, H. (2024). Exploring teacher awareness of artificial intelligence in education: A case study from Northern Cyprus. *European Journal of Investigation in Health, Psychology and Education, 14*(8), 2358–2376.

Kayıran, D., Sönmez, M., Avcı, A., & Haji Mohamud, R. Y. (2026). Teachers' perceptions of artificial intelligence in curriculum integration: Opportunities, concerns, and professional development needs. *Frontiers in Artificial Intelligence, 9*, Article 1806165.

Lindner, A., & Berges, M. (2020). Can you explain AI to me? Teachers' pre-concepts about artificial intelligence. In *2020 IEEE Frontiers in Education Conference (FIE)* (pp. 1–9). IEEE. https://doi.org/10.1109/FIE44824.2020.9274136

Mayor, L. B., & Bautista, C. C. (2025). Perception, attitude, and preparedness among higher education faculty in the adoption of artificial intelligence (AI). *Asian Journal of Educational Research, 13*(1).

Molefi, R. R., Ayanwale, M. A., Kurata, L., & Chere-Masopha, J. (2024). Do in-service teachers accept artificial intelligence-driven technology? The mediating role of school support and resources. *Computers and Education Open, 6*, Article 100191. https://doi.org/10.1016/j.caeo.2024.100191

Mujahidah, M., Tarigan, F., Dj, M., Pirdaus, M., Sanjaya, D., & Yusuf, M. (2025). Teachers' perceptions and attitudes towards artificial intelligence (AI) integration in suburban school. *Journal of Curriculum and Teaching, 14*(2), 98–108. https://doi.org/10.5430/jct.v14n2p98

Nadaf, S. R., & Aaglawne, K. D. (2025). Teachers' readiness and attitudes toward integrating artificial intelligence in instruction. *Journal of Advance and Future Research, 3*(11), 899–902. https://rjwave.org/JAAFR/papers/JAAFR2511326.pdf

Nasser AlKanaan, H. M. (2022). Awareness regarding the implication of artificial intelligence in science education among pre-service science teachers. *International Journal of Instruction, 15*(3), 895–912. https://doi.org/10.29333/iji.2022.15348a

Nazaretsky, T., Cukurova, M., Ariely, M., & Alexandron, G. (2021). *Confirmation bias and trust: Human factors that influence teachers' attitudes towards AI-based educational technology*. OSF Preprints. https://doi.org/10.35542/osf.io/dzqju

Pandey, P. K., & Angadi, G. R. (2024). Teachers' perspectives towards artificial intelligence enabled classrooms in school education. *Poonam Shodh Rachna, 3*(5).

Pokrivcakova, S. (2023). Pre-service teachers' attitudes towards artificial intelligence and its integration into EFL teaching and learning. *Journal of Language and Cultural Education, 11*(3), 100–114. https://doi.org/10.2478/jolace-2023-0031

Qureshi, N., Qureshi, F., Bandeali, D., & Akbar, S. (2025). Teacher perceptions and readiness for AI-enhanced teaching in developing countries. *The Critical Review of Social Sciences Studies, 3*(3), 1665–1682.

R Core Team. (2026). *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. https://www.r-project.org/

Rosseel, Y. (2012). Lavaan: An R package for structural equation modeling. *Journal of Statistical Software, 48*(2), 1–36. https://doi.org/10.18637/jss.v048.i02

Shirin, A. (2022). Artificial intelligence technology on teaching-learning: Exploring Bangladeshi teachers' perceptions. *Embedded Self-Organizing Systems, 9*(4), 3–9. https://doi.org/10.14464/ess.v9i4.553

Uygun, D. (2024). Teachers' perspectives on artificial intelligence in education. *Advances in Mobile Learning Educational Research, 4*(1), 931–939. https://www.researchgate.net/publication/378789914_Teachers%27_perspectives_on_artificial_intelligence_in_education

Wickham, H., & Bryan, J. (2023). *Read Excel files with readxl* (R package version 1.4.3). https://readxl.tidyverse.org/

Yau, K. W., Chai, C. S., Chiu, T. K., & Lin, C.-P. (2023). A phenomenographic approach on teacher conceptions of teaching artificial intelligence (AI) in K-12 schools. *Education and Information Technologies*, *28*, 1041–1064. https://doi.org/10.1007/s10639-022-11161-x

Zogopoulos, K., Panagiotopoulos, G., & Karatzas, A. (2025). Artificial intelligence in education: Attitudes, knowledge and perspectives. *IOSR Journal of Research & Method in Education*, *15*(1), 53–60.