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Artificial Intelligence: Exploring Teachers Perceptions and Experience for Classroom Learning

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ABSTRACT

This research investigated the educators have been using AI to enhance student engagement, improve instructional strategies and create personalized learning experiences, therefore the contribution of AI to the education sector cannot be understated. The intent of this research was to examine the perceptions and experiences teachers have about using AI in education. Specifically, this research examined the level of teachers' knowledge of AI, the level of readiness for the use of AI, teachers' experiences with AI, their perceived benefits from incorporating AI into education and their perceived challenges associated with the use of AI in education. The method used for collecting data was using a structured questionnaire that was distributed to teachers in selected educational institutions. The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS) for the purposes of determining the frequency, percentage, mean and correlation between various factors. The study's results indicated that the majority of respondents perceive the use of artificial intelligence (AI) positively in education. AI technologies have been reported by teachers to increase teaching efficiency, facilitate classroom management, aid in lesson planning, and motivate and engage students. AI tools are also viewed as ways for teachers to lessen their workload, provide one-on-one assistance to students, and offer personalized learning opportunities for students. However, many challenges were reported by educators as well, such as insufficient training; inadequate technology; concerns about ethics; problems with data privacy; and limited support from their respective institutions. Ultimately, the findings of the study suggest that teacher attitudes toward the successful implementation of AI in the classroom strongly influence their willingness to adopt new technologies. By providing educators, policymakers, and schools/colleges with an understanding of how AI can be utilized effectively, the study will assist in the development of strategies that will help promote ethical and meaningful classroom use of AI.

INTRODUCTION

One of the biggest technological advances yet seen in modern education is the inclusion of Artificial Intelligence (AI). According to Alwaqdani (2025) says that AI uses computer-based systems and technology for tasks that require thinking (usually associated with humans), which include solving problems, making decisions, using language, analysing data and adapting to individual learners. In classrooms, AI is finding its way into the classroom to improve classroom instruction, provide personalised learning opportunities, streamline administration and enhance teaching effectiveness overall. Increasingly, AI is being used both to change the way teachers and learners interact (e.g., intelligent tutoring systems, virtual learning assistants, automated grading and adaptive learning systems) and to create new ways for teachers and learners to interact ChatGPT (Ho et al., 2025).

According to Chen and Feng (2025) express that AI is becoming an important tool for improving the quality of instruction and the level of Student engagement in schools. AI can help Teachers develop interactive lesson plans, deliver personalized feedback to Students, track Students' academic performance, and quickly identify problems with Student Learning. By using adaptive Learning technology, Students can receive education based on their Learning style, ability level, and academic needs. Based on the evidence available, Researchers have stated that implementing AI will help improve Student motivation, participation, critical thinking skills, and academic Performance by creating a more flexible and Student-centered Learning environment. Additionally, AI will help reduce the amount of time Teachers spend on repetitive tasks (i.e., grading, taking Attendance, and organizing content) so they can spend more time with their Students and developing their instructional skills.

Challenges of AI Integration in Education

According to (Kim et al., 2026) express that there are many advantages to using Artificial Intelligence (AI) in the classroom environment, also there are many challenges and issues that teachers have with implementing AI into their learning process. Teachers are not certain about the ethical implications of incorporating this type of technology into the educational setting, as well as how AI will affect their teaching methods and how AI will fit with the future of education. Teachers have become more concerned about academic dishonesty, over-dependence on AI programs or tools, and issues tied to student privacy and security of data, along with their lack of technological ability and the decrease in face-to-face interaction with students, within the context of educational discussions. Educators have also expressed concern that excessive reliance on AI will take away students' ability to think outside of the box and to use their creativity when problem-solving; their ability to communicate and work collaboratively with others; and, ultimately, their independent thought processes. In addition, a lack of institutional support, limited opportunities for teacher training, and an inadequate amount of technological infrastructure have created challenges for teachers related to their preparedness and overall readiness to successfully implement AI in their classroom (Salah et al., 2026).

Teachers' Perceptions and Experiences Regarding AI

According to (Kohout-Diaz, 2026) says that Influencing the way AI is adopted and implemented in schools are perceptions and experiences of teachers about AI technology. When teachers have positive feelings about using AI, they are likely to adopt new ways to teach and to incorporate technology into how they do their jobs. However, negative feelings toward AI or low confidence or lack of knowledge will create barriers to AI being used in the classroom. Teachers' perceptions of AI technology will be affected by their past experiences using AI and by how effective they believe AI will or would be for their students and how practical it will be in the classroom. There are many factors that impact teachers' views and experiences with integrating AI into their teaching practices including digital literacy, experience teaching, school policies, availability of professional development and resources available through the school. Therefore, understanding teachers' perspectives will be important to develop successful policies, training programs, and educational strategies that promote the effective use of AI in the classroom (Cheah & Kim, 2026).

Need and Significance of the Study

Educational systems are putting an emphasis on technology-enhanced learning environments more than ever and digital transformation in education has led to a rapid expansion of artificial intelligence (AI) technology in the education system (Vargas Portillo, 2026). This rapid expansion of AI and education creates implications for comprehensive research to explore how teachers perceive AI and how teachers experience AI's integration within the classroom. The examination of teachers' perceptions of AI in education and how teachers experience AI as an educational tool can provide useful information regarding the opportunities and challenges of AI as a teaching and learning tool. This information is valuable for educational administrators, policymakers, curriculum developers, and technology designers as they work toward ensuring that AI in education is implemented effectively, ethically, and sustainably.

Purpose of the Study

The study has three main objectives: First, to determine whether educators see artificial intelligence (AI) as having a positive impact on classroom learning. Second, to explore the extent to which educators feel they are prepared for the use of AI in their classroom, including challenges that they have experienced with implementation. Lastly, this study aims to investigate what type of influence the use of AI has on instructional practices, student engagement, classroom management, and the entire teaching/learning process. The results from this research could potentially aid in the advancement of educators' professional development, improve the support systems within the institutions where these educators are employed, and assist in the successful integration of AI technologies across all areas of education (Khanfar et al., 2026).

Objectives of the Study

- To examine teachers' perceptions of the integration of Artificial Intelligence (AI) in enhancing student learning at higher education institutions.
- To identify the key benefits and challenges faced by teachers when using AI-based tools in the classroom.
- To evaluate the perceived impact of Artificial Intelligence on student learning outcomes according to university-level teachers.
- To investigate the ethical concerns and considerations expressed by teachers in relation to the integration of Artificial Intelligence in higher education.
- To explore teachers' visions for the future of Artificial Intelligence in higher education and its potential implications for traditional teaching methods.

Research Questions

How do teachers view the potential of AI to impact student learning in higher education?

Which benefits and challenges do teachers perceive with respect to using AI in the classroom?

To what extent do teachers believe that Artificial Intelligence has the potential to improve student learning outcomes in higher education?

Which ethical considerations and concerns do teachers have about using Artificial Intelligence in university education?

How do teachers view the dynamics of future change with respect to Artificial Intelligence in higher education and its fitting into normative teaching practices?

Delimitation of study

- Only HEC recognized Public Sector universities.
- The current study was delimited to public sector universities offering programs in all departments.
- The perspectives of university-level instructors on the application of artificial intelligence in higher education will be particularly examined in this study.
- Understanding instructors' opinions on the use of AI in university-level teaching strategies, evaluation procedures, and administrative procedures will be the main focus of the study.

Significance of the Study

By providing insight into the opinions and attitudes of university-level instructors regarding the incorporation of artificial intelligence (AI) in higher education, the research study will help close the current research gap. Understanding the perspectives of educators can help us better navigate the potential and difficulties that artificial intelligence (AI) in academia presents. Additionally, this research has the potential to educate policymakers, educators, and decision-makers on how AI can be implemented in higher education in a way that maintains the crucial human element in education while also improving learning outcomes. Fostering inclusivity and diversity in the tech-enhanced classroom is further strengthened by investigating gender-related disparities in educators' usage of AI technologies. Ultimately, this study's findings will shape the future of technology-enhanced learning environments and play a pivotal role in ensuring equitable access to quality education.

RESEARCH METHODOLOGY

Research Design

According to Kerlinger, "An investigation's plan, structure, and strategy are all intended to help find answers to study questions and manage variance," according to the definition of research design. In actuality, the conceptual framework that the research is carried out in is called the research design. This study's objectives were achieved through the use of a quantitative and descriptive research technique, which also included processes for gathering data to counter research.

Population

All female and male teachers from HEC list of three public sector universities Multan were treated as population.

Table 1 *Targeted Population (Participant wise)*

Sr. #	Name of University	District	Teachers
1	Bahauddin Zakariya University Multan	Multan	56
2	The Women University Multan	Multan	54
3	The Emerson University Multan	Multan	53
	Total		220

Target Population

The target population will university teachers who are actively engaged in teaching at the selected universities. From this target population, a total of 160 respondents will be selected.

Instruments

A structured questionnaire should be used as the main tool for gathering data for this study. Multiple-choice questions, closed-ended questions with Likert-scale answers, and perhaps some open-ended questions should all be included in the questionnaire to enable a more thorough grasp of respondents' viewpoints. Concerns, attitudes, and views regarding the use of AI in higher education can all be evaluated with this questionnaire.

Sample Techniques and Sample Size

Using the resources and time available, a sample of three public sector universities was drawn, the selection of the departmental/academic units was made randomly. The sampling was completed using simple random sampling. A sample of 160 teachers was selected by convenience from the various departments of the faculty of social sciences so that they could participate in this research study. Of the 160 teachers, 41 were male (M, 41) and 119 were female (F, 119) and their ages ranged from under 30 to 45 years old. The departments of the social sciences of the three selected public sector universities were: Emerson University Multan, Women's University Multan, Bahauddin Zakariya University Multan

Validity and Reliability of Tools

With the aid of literature, questionnaires and interview questions will be prepared. Validity will be determined using the expert opinion method. A small-scale pilot testing of the tool will be done.

A structured interview will be designed to have an authentic view of the use of information and communication technologies to improve the educational experience for students. The experts will validate that, and the pilot study will help judge the reliability of the tool.

Data Collection

Teachers across the Departments of Social Sciences at WUM's, BZU's, and Emerson University were given 160 surveys to complete; 41 were male and 119 were female. The target sample size was achieved through the collection of surveys over several weeks at three different universities. The researcher provided respondents with clearly written instructions and described the instructions verbally if required. The researcher maintained the confidentiality of all information provided by respondents for the duration of the research project. Therefore, the teachers had the assurance that legitimate and honest data could be collected regarding their perceptions of artificial intelligence in post-secondary educational institutions.

Tool Development

Using known approaches in survey design and instrument development, the quantitative tools, such as the demographic section, Likert scale statements, and structured questionnaire, will be developed. The items' precision, relevance, and clarity will be carefully considered to make sure they appropriately reflect instructors' opinions about artificial intelligence in higher education.

Ethical Consideration

The respondents will be asked for their consent to participate in the study and will get a booklet of questionnaires that include questions about their demographics and teacher perception. Researchers will make sure that their data is kept private and utilized exclusively for research.

DATA ANALYSIS

Gender		Frequency	Percent
Valid	Male	114	76.0
	Female	36	24.0
	Total	150	100.0

The table (2) presents data on gender distribution within a sample of 150 teachers, who took part in the study wherein the ratio of male 114 teachers, constituting 76.0% of the sample, identify as male, while 36 teachers, making up 24.0% of the sample, identify as female.

Table 3 *Age wise Analysis*

Age		Frequency	Percent
Valid	31-35	79	52.7
	36-40	41	27.3
	41-50	30	20.0
	Total	150	100.0

The table (3) shows the age of teachers within a sample of 150 teachers. The results depicted that in the study area maximum 52.7 % respondents belongs to the age group between 31-35. The second highest percentage 27.3 % of the respondents belongs to the age group between 36-40. Remaining 20.0% respondents were between the ages of 41-50. The result revealed that the respondents were mature enough and capable to respond to the questions on the designed structured questionnaire regarding the impact of teaching strategies on their learning, academic growth and mindset developing.

Table 4 *Teaching Experience wise Analysis*

Experience		Frequency	Percent
Valid	Less Than 5 Years	89	59.3
	6-10 Years	19	12.7
	11-15 Years	29	19.3
	Above 16 Years	13	8.7

	Total	150	100.0

This table (4) demonstrates the distribution of teachers based on their teaching experience. The majority, 89 (59.3%) teachers having less than 5 years' experience. The second highest number of teachers 29 (19.3%) were experienced between 11-15 year in the sample. The third highest 19 (12.7%) teachers were experienced between 6-10 years. While, the remaining 13 (8.7%) teachers were experienced above 16 years.

Table 5 *Designation wise Analysis*

	Designation	Frequency	Percent
Valid	Lecturer	85	56.7
	Assistant Professor	34	22.7
	Associate Professor	12	8.0
	Professor	19	12.7
	Total	150	100.0

The table (5) identifies the designation wise distribution among a group of teachers. It finds that 56.7% (85 teachers) were designated as lecturer. Additionally, 22.7% (34 teachers) were designated as Assistant Professors, while, 8.0% (12 teachers) were designated as Associate Professors. At the end, remaining 12.7% (19 teachers) of the sample had the designation of Professor.

Table 6 *Interest in AI Education Wise Analysis*

Interest in AI		Frequency	Percent
Valid	Yes	126	84.0
	No	24	16.0
	Total	150	100.0

The table (6) illustrates the distribution of interest in AI education among a group of teachers. The findings show that highest number of the sample 126 (84.0%) teachers had their interest in artificial intelligence education. While, a less number of the sample 24 (16.0%) teachers had no interest in artificial intelligence education.

Correlation Analysis

Table 7 *Objective wise analysis using Pearson Correlation Coefficients*

	Obj. 1	Obj. 2	Obj. 3
Obj. 1	1		
Obj. 2	0.575**	1	
Obj. 3	0.652**	0.575**	1

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

The table (7) displays a correlation matrix illustrating the relationships among three variables: Obj. 1, Obj. 2, and Obj. 3. The diagonal values (set to 1) represent the perfect correlation of each variable with itself. The correlation between Obj. 1 and Obj. 2 is *0.575*, show a moderate positive relationship. Obj. 2 and Obj. 3 show a correlation of 0.575, suggesting a consistent association. The strongest correlation is between Obj. 1 and Obj. 3, at 0.652, which implies a stronger positive relationship than the others. The double asterisks (**) likely denote statistical significance, possibly at the $p < .01$ level, suggesting that these correlations are statistically meaningful and not due to chance.

Table 8 *Objective wise analysis using Pearson Correlation Coefficients*

	Q1f.a	Q1f.b	Q1f.c	Q2.a	Q2.b	Q2.c	Q3.a	Q3.b	Q3.c	Q3.d
Q1f.a	1									
Q1f.b	.252	1								
Q1f.c	.530	.184	1							
Q2f.a	.465	.730	.471	1						

Q2f.b	.249**	.630**	.281**	.686**	1					
Q2f.c	.474**	.104**	.617**	.297**	.362**	1				
Q3f.a	.267**	-093	.627**	.063	-004	.556**	1			
Q3f.b	.396**	.708**	.300**	.823**	.710**	.271**	-063	1		
Q3f.c	.315**	.488**	.366**	.452**	.559**	.279**	.317**	.609**	1	
Q3f.d	.315**	.488**	.366**	.452**	.559**	.279**	317**	.609**	1.000***	1

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

**Correlation is significant at the 0.05 level (2-tailed).*

The shows the degree of association between various items, with values from weak to strong positive correlations. As expected, each item perfectly correlates with itself (indicated by the 1s along the diagonal). In the Q1f group, Q1f.c shows a strong correlation with Q1f.a (r = .530), while Q1f.b has a weaker association with both Q1f.a (r = .252) and Q1f.c (r = .184). In the Q2f group, items are generally more strongly related, particularly between Q2f.a and Q2f.b (r = .686**) and Q2f.a and Q2f.c (r = .297**). These significant correlations (marked by **, likely indicating p < .01) suggest consistent measurement within this domain. Q3f.a correlates strongly with Q1f.c (r = .627**) and Q2f.c (r = .556**), suggesting overlapping constructs. Q3f.b and Q2f.a show a very strong correlation (r = .823**), implying they may be capturing nearly identical aspects of the same underlying factor. Q3f.c and Q3f.d show perfect correlation (r = 1.000***), which might indicate either identical questions or data duplication. Overall, the pattern of correlations suggests strong internal consistency within Q2f and Q3f groups, and several meaningful associations across groups, reinforcing the construct validity of the questionnaire items.

Summary

The study's research methodology will crucial because it must use both descriptive and quantitative techniques to investigate university instructors' opinions about artificial intelligence (AI) in higher education. Measurable and statistically analyzed objectivity is the fundamental component of the quantitative research paradigm. Find out more about the opinions of high-level academics regarding AI. To determine and examine the challenges educators have when using AI into their learning activities. Determining the opinions of lecturers regarding the function of artificial intelligence in higher education and the potential effects it may have on conventional teaching techniques. The study's main information collection tool is a structured questionnaire that will allow researchers to look at a range of aspects of AI integration in teaching and learning processes. Because the quantitative technique uses numerical data, the researcher can test hypotheses, make decisions, and look for relationships between variables. Throughout the questionnaire development process, a group of specialists in pedagogical approaches and educational technology is engaged to guarantee the tool's validity. Good internal consistency in social science research is indicated by a Cronbach's alpha value of 0.7 or higher. After the pilot study, Cronbach's alpha is computed to confirm that the questionnaire satisfies this requirement, so guaranteeing the instrument's reliability for the main inquiry.

CONCLUSION

The majority of educators are in favor of using AI in the classroom due to its benefits and ability to enhance assessment. They are unable to simultaneously improve critical thinking skills and address accessibility issues. In contrast, instructors are motivated to incorporate artificial intelligence and contemporary technology into their teachings. Its potential benefits do raise some questions. With a focus on its advantages and the possibility of improved evaluation techniques, most teachers are excited about integrating AI in the classroom. Administrative automation, diversity, and inclusion are thought to gain less from it. In conclusion, even though artificial intelligence (AI) has many advantages, a few significant obstacles need to be overcome before AI can be completely included into the teaching and learning process.

All things considered, teachers are generally happy with the resources available to them at their schools and support the integration of AI into the classroom. In terms of training and help with AI tools, they perceive a fair amount of support. Less is known, though, regarding the overarching strategy for incorporating AI technologies into the curriculum. Though the tools and support are available, there requires a clearer strategy to integrate AI into teaching practices effectively.

DISCUSSION

The study aims to determine how educators view the current place of artificial intelligence in postsecondary education. to identify and measure the different tasks educators face when either employing AI technologies in their practice. To assess how university professors, perceive the impact of AI on learning outcomes. To identify the ethical dilemmas and challenges that educators have indicated regarding the use of AI in higher education. to examine how educators, view the evolution of AI in higher education and how it might affect traditional teaching practices.

In conclusion, one study indicated that artificial intelligence (AI) technologies can improve the teaching and learning experience by assisting in identifying and meeting the particular learning needs of each student. Human learning is a social phenomenon, some brain regions are wired to be socially active, Li and Jeong (2020) state.

The other results of the current study demonstrated that AI technologies have the potential to enhance the teaching and learning process and can assist in identifying and meeting each student's specific learning needs. Similarly, the teacher-student interaction is essential to students' learning and motivating for their personal development (Roorda et al., 2011; Cheng and Tsai, 2019).

The additional findings of this study showed that students actively participate in the decision-making process about the integration of AI, and I receive sufficient training and assistance to incorporate AI technologies into my instruction. Accordingly, Daniel (2019) develops fresh research topics and ideas, makes use of cutting-edge methods and technologies for gathering and analyzing data, and eventually establishes itself as a standard research paradigm.

Recommendations for Further Studies

1. Examine how students view AI integration in higher education to determine how it affects learning opportunities.
2. To monitor the progress and efficacy of integrating AI over time, conduct longitudinal research.
3. To determine which AI-driven teaching strategies and technologies work best, compare them.

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