

# Teachers' Perception of Artificial Intelligence Inside the Classroom

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**Abstract :** This study investigates teachers' perceptions and expectations regarding the integration of Artificial Intelligence (AI) within classroom settings, using a mixed-methods approach to acquire a comprehensive understanding of educators' attitudes, experiences, and concerns. A total of 90 teachers from various educational level participated in the research, with quantitative data collected through a Likert scale survey (1 = Strongly Disagree to 5 = Strongly Agree) and qualitative insights obtained through open-ended responses.

Findings from the quantitative analysis revealed that educators generally view AI as a supportive tool for enhancing instructional effectiveness, personalizing learning, and managing workloads. However, significant concerns were also noted regarding infrastructure limitations, ethical risks and potential impacts on students' critical thinking. Complementing these results, qualitative findings highlighted both optimism and caution among teachers. While many anticipated AI's potentials to improve engagement and academic support, others feared its overuse could lead to diminished student motivation and overreliance on technology.

This study concludes that successful AI integration requires not only technological readiness but also thoughtful consideration of pedagogical and ethical implications. The results emphasize for comprehensive training, clear implementation guidelines, and strategies to preserve both teacher autonomy and student agency in an AI-enhanced educational environment.

**IndexTerms - Artificial Intelligence in Education; Teacher Perception; Ethical Concerns; Personalized Learning; AI Integration in Classrooms**

## INTRODUCTION

The integration of Artificial Intelligence (AI) in educational settings is reshaping how teaching and learning are approached around the world. From intelligent tutoring systems to automated grading tools and personalized learning platforms, AI is rapidly becoming a key player in modern classrooms. While technological advancements continue to evolve, the successful implementation of AI in education largely depends on the perceptions and attitudes of teachers—who serve as the primary facilitators of student learning. Understanding how teachers perceive AI is therefore essential to ensure its effective adoption and maximize its potential benefits.

Russell, S. (2019) suggests that concerns about the risks of AI stem from ignorance, but he emphasizes that long-term AI safety is an important issue. As Lee and Qiufan (2021) state, AI will define the 21st century, revolutionizing medicine and education, generating wealth, and introducing new forms of work, communication, and entertainment. Its weight and influence are growing every day, and its impacts can be felt in almost every sphere of society: in smartphones, social networks, bringing virtual assistants to life, in the use of translators or reading recommendations, movies, videos, and music, shaping everyday life. Arbix, G. (2021).

Echoing this sentiment, Tapalova & Zhiyenbayeva (2022) explored deeper into the role of AI in facilitating personalized learning pathways. Their research underscores the adaptability of AI systems to cater to the diverse needs of individual learners, a testament to the technology's potential to democratize and customize education. By focusing on personalization, they highlight a core advantage of AI: its ability to mold educational content and delivery according to the unique preferences, strengths, and weaknesses of each student. This personalized approach not only fosters an inclusive learning environment but also ensures that education is more relevant, engaging, and effective (Tapalova & Zhiyenbayeva, 2022).

In the same manner, Artificial Intelligence implementation in the classroom has not been fully accepted due to the great number of teachers who still view technology negatively and prefer not to utilize it as 2 teachers do not fully realize the potential or usefulness of AI in education even though they have some limited knowledge about AI. (Prensky, 2008; Kaban and Ergul, 2020; Istenic et al., 2021).

Indeed, technologies with AI are perceived as generating less workload than traditional tools. The main result is that technologies with AI are perceived as having much less cost on workload than traditional tools. A hypothesis is then validated, even though technologies with AI are not judged to decrease workload. Machado, A., et al (2025)

Parallely, the work of Yu (2021) enriches the discourse from an administrative perspective, examining the development and implementation of AI in university education management. Their qualitative analysis reveals the dual nature of AI in educational administration, pointing out the benefits such as efficiency and data-driven decision-making, alongside challenges including ethical considerations and the need for comprehensive training. This nuanced exploration emphasizes that the impact of AI extends beyond the classroom, affecting the broader operational frameworks of educational institutions (Yu, 2021)

Building on these perspectives, Rios-Campos et al. (2023) specifically position ChatGPT within the broader context of AI in education. Their investigation into the applications of AI-powered tools like ChatGPT for students, teachers, and educational systems at large offers profound insights into the versatile utility of AI. From automating routine tasks to facilitating personalized

learning and enhancing administrative efficiency, the study elucidates the myriad ways AI can serve as a catalyst for educational innovation and improvement (Rios-Campos et al., 2023).

A study conducted in China of Jace Hargis et al, (2024) examining the integration of AI in primary school English education revealed that teachers generally hold positive perceptions of AI's role in enhancing student engagement, supporting personalized learning, and promoting critical thinking Jace Hargis et al, (2024). However, the study also identified key concerns among educators, including issues related to student motivation, data privacy, health impacts from prolonged screen exposure, and infrastructural limitations. The authors emphasized the need for clear guidelines, adequate teacher training, and appropriate resource allocation to support AI implementation. They also stressed the importance of incorporating screen-time management and eye health education into curricula to ensure ethical and responsible AI use. The study concluded that with strategic planning and support, AI has the potential to transform education while maintaining student well-being and fostering digital-age competencies.

Gatlin (2023) conducted a study examining the attitudes and perceptions of pre-service teachers regarding the use of Artificial Intelligence (AI) in classroom settings. The research aimed to assess participants' familiarity with AI, their comfort in utilizing AI-driven tools, and their willingness to integrate such technologies into their future teaching practices. Findings revealed that while pre-service teachers generally recognized the potential of AI to support instructional strategies and enhance student learning, many expressed uncertainties due to limited exposure and training. The study emphasized the importance of incorporating AI literacy and practical applications into teacher education programs to better prepare future educators for the evolving demands of technology-enhanced classrooms. By highlighting the existing gap between awareness and readiness, the research underscores the critical role of targeted professional development in fostering effective and responsible AI integration in education.

Previous research of Aghaziarati et al (2023) has explored teacher attitudes toward AI, shedding light on both the optimism and apprehension surrounding its classroom use. However, much of the existing literature remains qualitative in nature, often limited by smaller sample sizes. These limitations highlight the need for further research that quantifies teacher perceptions on a broader scale, enabling a more generalizable understanding of trends and concerns.

Drawing from these seminal works, it is evident that the integration of AI in education heralds a new era of teaching and learning, characterized by enhanced personalization, efficiency, and engagement. Yet, amidst the optimism, it is imperative to critically assess the implications of this technological infusion from the educators' vantage point. This study seeks to fill that gap by conducting a mixed method (both qualitative and quantitative method) investigation into teachers' perceptions of artificial intelligence within the classroom environment. By surveying 90 educators from various educational levels and backgrounds, this research aims to identify prevailing, perceived benefits and challenges, and the overall readiness of teachers to embrace AI-driven tools in their teaching practices. The findings of this study can provide valuable knowledge for policymakers, school administrators, and technology developers working to support teachers in the transition to AI-enhanced education.

## NEED OF THE STUDY

The integration of Artificial Intelligence (AI) in educational settings is reshaping how teaching and learning are approached around the world, and the successful implementation of AI in education largely depends on the perceptions and attitudes of teachers—who serve as the primary facilitators of student learning. Artificial Intelligence implementation in the classroom has not been fully accepted due to the great number of teachers who still view technology negatively and prefer not to utilize it as teachers do not fully realize the potential or usefulness of AI in education even though they have some limited knowledge about AI. Previous research has explored teacher attitudes toward AI; however, much of the existing literature remains qualitative in nature, often limited by smaller sample sizes, highlighting the need for further research that quantifies teacher perceptions on a broader scale.

### Research Questions/Objectives:

As Artificial Intelligence (AI) becomes more common in education, understanding how teachers perceive its use in the classroom is essential. This study, titled "Teachers' Perception on Artificial Intelligence Inside the Classroom," aims to answer the following questions:

1. To what extent have teachers used AI tools or resources in their teaching practices?
2. What are teachers' perceived benefits and challenges of integrating AI into educational practices?
3. How do teachers perceive the impact of AI technologies on curriculum delivery?
4. What are teachers' levels of concern regarding ethical and social issues associated with AI in education?
5. What are teachers' expectations regarding the future role of AI in education?

## RESEARCH METHODOLOGY

### Research Design

This study adopts **Mixed-Method Approach** to examine teachers' perceptions of Artificial Intelligence (AI) integration in classroom settings. This approach is appropriate as it aims to systematically quantify how teachers experience, perceive, and evaluate the use of AI in their teaching practices. The study investigates the frequency of AI use, perceived benefits and challenges, instructional and curriculum impacts, and ethical and social concerns.

To explore these aspects, quantitative data will be collected from 90 teachers across various educational levels using a structured questionnaire with Likert-scale items. The responses will be analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation, providing a clear numerical overview of current teacher perspectives on AI in education.

In addition, to gain deeper insight into teachers' expectations regarding the future role of AI in education (Research Question #5), the study incorporates a qualitative component. Open-ended questions will be included in the survey to allow participants to express

their thoughts in their own words. Responses to these items will be analyzed thematically to identify emerging patterns and insights that cannot be captured through quantitative measures alone.

### Population and Sample

This study employed stratified random sampling to ensure proportional representation from different educational levels. A total of 90–100 teacher-respondents were selected from elementary, secondary, and tertiary institutions in Eastern Samar. This method allowed for a more accurate reflection of teacher perceptions across educational settings and ensure proportional representation from each group.

### RESULT AND DISCUSSION

This study explored teachers' perceptions of AI in the classroom through quantitative data on its use, benefits, and ethical concerns and qualitative insights on expectations.

In this study, a total of 90 educators participated, providing valuable knowledge into their perception towards the use, benefits and usages, impact in curriculum and instruction delivery, ethical, social concerns and expectation of teachers in Artificial Intelligence inside the classroom. The demographic composition of the of the participants was diverse encompassing a wide range of teaching levels and teaching experience. Specifically, the breakdown included 30 elementary teachers (33.33%), 30 secondary teachers (33.33%) and 30 tertiary educators (33.33%) representing the broad educational stages. The participant's year of teaching experience range widely, from early career teachers with less than 5 years of experience (47 participants, 52.22%) to seasoned professional with over 15 years of services in the field (9 participants, 10%). Age of the participants was not restricted to ensure no bias, Age 20 – 30 with 51 participants (56.7%), age 31 – 40 with 33 participants (36.7%), age 41 – 50 with 4 participants (4.4%) and age 51 – 65 with 2 participants (2.2%). The sex of the participants was no restriction to ensure equality, with 69 female participants (76.7%) and 21 male participants (23.3%).

Table 1. Extent of AI Usage in Teaching Practices

	Mean	Std. Deviation	Skewness	Kurtosis
I frequently use AI tools (e.g., ChatGPT, Grammarly, adaptive learning platforms, etc.) in my teaching.	3.111	1.065	-0.112	-0.375
AI tools are integrated into my lesson planning activities.	3.056	1.125	-0.208	-0.611
I use AI-driven assessment or grading tools to evaluate students' performance.	2.756	1.193	0.042	-0.774
I employ AI platforms to enhance classroom discussions and student participation.	3.156	1.101	-0.212	-0.437
I have been trained on how to incorporate AI tools effectively into my teaching.	2.878	1.262	-0.074	-0.978

Table 1 presents the descriptive statistics on the extent of AI usage among teachers in various instructional practices. The results indicate that the highest mean score was observed in the item, "*I employ AI platforms to enhance classroom discussions and student participation*" (M = 3.156, SD = 1.101), suggesting that teachers are more inclined to use AI tools for interactive and participatory purposes in their classrooms. This reflects a growing interest in leveraging AI to boost student engagement and collaboration.

Conversely, the item with the lowest mean score was "*I use AI-driven assessment or grading tools to evaluate students' performance*" (M = 2.756, SD = 1.193). This implies that teachers are less likely to use AI for evaluative purposes, possibly due to concerns over fairness, accuracy, or lack of familiarity with AI-based assessment tools.

In terms of variability, the highest standard deviation was found in the statement "*I have been trained on how to incorporate AI tools effectively into my teaching*" (SD = 1.262), indicating a wide range of responses. The skewness and kurtosis values mostly fall within acceptable ranges, indicating relatively normal distribution of responses. This suggests that while some teachers have received substantial training, others may not have had any exposure, pointing to unequal access to professional development in AI integration.

Table 2. Frequency Table of the Extent of AI Usage in Teaching Practices

Likert Scale	I frequently use AI tools (e.g., ChatGPT, Grammarly, adaptive learning platforms, etc.) in my teaching.		AI tools are integrated into my lesson planning activities.		I use AI-driven assessment or grading tools to evaluate students' performance.		I employ AI platforms to enhance classroom discussions and student participation.		I have been trained on how to incorporate AI tools effectively into my teaching.	
	f	%	f	%	f	%	f	%	f	%
1	7	7.78	10	11.11	18	20.00	8	8.89	18	20.00
2	16	17.78	16	17.78	16	17.78	14	15.56	14	15.56
3	36	40.00	31	34.44	33	36.67	34	37.78	28	31.11
4	22	24.44	25	27.78	16	17.78	24	26.67	21	23.33
5	9	10.00	8	8.89	7	7.78	10	11.11	9	10.00
Missing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>

Table 2 shows the frequency and percentage distribution of teacher responses across a five-point Likert scale regarding the extent of their AI usage in specific teaching practices. Across all items, the most frequent rating was “3” (Neutral), with percentages ranging from 31.11% to 40.00%, suggesting a general sense of uncertainty or moderate engagement with AI tools in the classroom. This trend is especially pronounced in the item “I frequently use AI tools (e.g., ChatGPT, Grammarly, adaptive learning platforms, etc.) in my teaching,” where 40.00% of respondents selected “3.”

The highest percentage of strong agreement (rating of “5”) was found in “I employ AI platforms to enhance classroom discussions and student participation” (11.11%), which aligns with the highest mean score in Table 1. This indicates that a notable proportion of teachers are beginning to recognize the value of AI in promoting student interaction.

On the other hand, the lowest percentage of agreement was observed in “I frequently use AI tools (e.g., ChatGPT, Grammarly, adaptive learning platforms, etc.) in my teaching”, where only 7.78% selected “1” (Strongly Disagree). This confirms that few educators do not use AI tools in their teaching.

The findings answer the research question 1: “To what extent have teachers used AI tools or resources in their teaching practices?” Results show that teachers use AI tools to a moderate extent, especially to enhance classroom interaction. However, the use of AI for assessment is limited, indicating some hesitation. The wide variation in responses about training highlights the need for consistent professional development. To support broader AI integration, schools should provide targeted training and address practical and ethical concerns.

Table 3. Perceived Benefits and Challenges of AI Integration

	Mean	Std. Deviation	Skewness	Kurtosis
AI tools have improved the efficiency of my teaching.	3.389	1.013	-0.253	-0.144
AI helps me personalize instruction to better meet the diverse needs of students.	3.378	1.034	-0.569	0.296
AI enhances students' engagement and motivation in learning.	3.233	1.061	-0.484	-0.150
The lack of access to reliable AI tools limits my ability to integrate AI into my classroom.	2.944	1.105	-0.144	-0.436
I find it challenging to select the most appropriate AI tool for my students' learning needs.	3.011	0.906	0.071	0.126
Lack of proper infrastructure (e.g., internet access, devices) is a barrier to using AI in my classroom.	3.700	1.116	-0.370	-0.838

Table 3 presents the descriptive statistics of teachers’ perceptions regarding the benefits and challenges of AI integration in education. The analysis includes responses from 90 participants across six statements. The data reveals a range of mean scores from 2.944 to 3.700, and standard deviations indicating moderate variability in responses.

The highest mean score (M = of 3.700, SD = 1.116) corresponds to the statement “Lack of proper infrastructure (e.g., internet access, devices) is a barrier to using AI in my classroom.” This implies that infrastructure limitations are a significant challenge perceived by educators. It highlights a practical barrier that could hinder the full adoption of AI tools, regardless of their potential benefits.

On the other hand, the lowest mean score (M = 2.944, SD = 1.105) is associated with “The lack of access to reliable AI tools limits my ability to integrate AI into my classroom.” While still above the neutral point (3.0), this suggests a comparatively lower—yet notable—perception of tool availability as a barrier.

Regarding the benefits, the item “AI tools have improved the efficiency of my teaching” has a mean (M = 3.389, SD = 1.013), slightly higher than the means for personalization and student engagement. These suggest a moderately positive perception of AI’s impact on teaching effectiveness, student engagement, and personalized learning.

Overall, the table illustrates that while teachers recognize certain benefits of AI, their enthusiasm is tempered by systemic challenges—primarily infrastructure and tool accessibility. The skewness and kurtosis values mostly fall within acceptable ranges, indicating relatively normal distribution of responses.

Table 4. Frequency Table of Perceived Benefits and Challenges of AI Integration

Likert Scale	AI tools have improved the efficiency of my teaching.		AI helps me personalize instruction to better meet the diverse needs of students		AI enhances students' engagement and motivation in learning		The lack of access to reliable AI tools limits my ability to integrate AI into my classroom		I find it challenging to select the most appropriate AI tool for my students' learning needs		Lack of proper infrastructure (e.g., internet access, devices) is a barrier to using AI in my classroom	
	f	%	f	%	f	%	f	%	f	%	f	%
1	4	4.44	7	7.78	8	8.89	12	13.33	4	4.44	2	2.22
2	10	11.11	5	5.56	10	11.11	14	15.56	19	21.11	12	13.33
3	36	40.00	36	40.00	33	36.67	38	42.22	44	48.89	25	27.78
4	27	30.00	31	34.44	31	34.44	19	21.11	18	20.00	23	25.56
5	13	14.44	11	12.22	8	8.89	7	7.78	5	5.56	28	31.11
Missing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>

Table 4 presents the frequency and percentage distribution of teacher responses regarding their perceived benefits and challenges of AI integration in the classroom, using a five-point Likert scale. The most common response across many items was “3” (Neutral) with percentage ranging from 27.78% to 48.89%, suggesting a general ambivalence or cautious optimism about AI’s role in education. This trend was especially highlighted in the item “*I find it challenging to select the most appropriate AI tool for my students' learning needs*” where 48.89% of respondents selected “3”.

The highest percentage of strong agreement (rating if “5”) was found in “*Lack of proper infrastructure (e.g., internet access, devices) is a barrier to using AI in my classroom*” (31.11%), which aligns with the highest mean score in Table 3. This with common concerns in under-resourced educational settings where technology implementation is often hindered by logistical limitations.

The lowest percentage of agreement was observed in “*Lack of proper infrastructure (e.g., internet access, devices) is a barrier to using AI in my classroom*” where only 2.22% selected “1” (Strongly Disagree). This confirms that few educators do not experience limitation on infrastructure in their classroom and/or does not consider the lack of infrastructures as barrier in using AI in their classroom.

These findings directly address Research Question 2: “*What are teachers' perceived benefits and challenges of integrating AI into educational practices?*” Together, these results reveal that while teachers acknowledge the potential benefits of AI, such as enhanced personalization and instructional efficiency, their ability to harness these advantages is often constrained by technical and infrastructural barriers. This combination of neutral responses and concern over infrastructure suggests that without targeted support—such as training, resource allocation, and clear implementation strategies—the full integration of AI in educational settings may remain limited.

Table 5. Perceived Impacts of AI on Curriculum and Instruction

	Mean	Std. Deviation	Skewness	Kurtosis
AI technology has changed the way I deliver my lessons.	3.278	1.039	-0.153	-0.229
AI encourages innovation in my instructional delivery methods.	3.411	1.037	-0.220	-0.505
The use of AI tools allows me to spend more time on interactive and creative classroom activities.	3.367	1.022	-0.276	-0.257
AI assists in differentiating instruction for varied learning styles.	3.467	0.939	-0.318	0.212
AI integration has shifted the focus of my teaching from content delivery to facilitation of learning.	3.333	0.912	-0.081	-0.102
The integration of AI has led me to rethink and update my teaching methods.	3.478	0.997	-0.390	0.101

Table 5 presents the descriptive statistics summarizing how teachers perceive the impact of AI on their curriculum and instructional methods. Among the six items, the highest mean score was for “*The integration of AI has led me to rethink and update my teaching methods*” (M = 3.478, SD = 0.997), indicating a moderate to high level of agreement. This suggests that many teachers recognize the transformative influence of AI in promoting reflective teaching practices.

This was closely followed by “*AI assists in differentiating instruction for varied learning styles*” (M = 3.467), and “*AI encourages innovation in my instructional delivery methods*” (M = 3.411), highlighting AI’s role in supporting adaptive and innovative teaching. The standard deviations across these items remained low (below 1.04), implying a relatively consistent perception among respondents.

The lowest mean was observed in the statement “*AI technology has changed the way I deliver my lessons*” (M = 3.278), though it still falls within the moderate agreement range. The skewness and kurtosis values mostly fall within acceptable ranges, indicating relatively normal distribution of responses. This indicates that while AI is perceived as beneficial, its full transformative impact on delivery methods may not yet be fully realized by all educators.

Table 6. Frequency Table of Perceived Impacts of AI on Curriculum and Instruction

Likert Scale	AI technology has changed the way I deliver my lessons.		AI encourages innovation in my instructional delivery methods		The use of AI tools allows me to spend more time on interactive and creative classroom activities		AI assists in differentiating instruction for varied learning styles		AI integration has shifted the focus of my teaching from content delivery to facilitation of learning		The integration of AI has led me to rethink and update my teaching methods	
	f	%	f	%	f	%	f	%	f	%	f	%
1	5	5.56	3	3.33	4	4.44	3	3.33	2	2.22	4	4.44
2	12	13.33	14	15.56	12	13.33	7	7.78	12	13.33	7	7.78
3	38	42.22	30	33.33	33	36.67	37	41.11	39	43.33	35	38.89
4	23	25.56	29	32.22	29	32.22	31	34.44	28	31.11	30	33.33
5	12	13.33	14	15.56	12	13.33	12	13.33	9	10.00	14	15.56
Missing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>

Table 6 presents the frequency and percentage distribution of teacher responses regarding the perceived impacts of AI on curriculum and instruction, using a five-point Likert scale. Across all six items, the most commonly selected response was “3” (Neutral), with values ranging from 33.33% to 43.33%, indicating a generally moderate or uncertain stance on the influence of AI on teaching practices.

The item “*The integration of AI has led me to rethink and update my teaching methods*” and “*AI encourages innovation in my instructional delivery methods*” had the highest percentage of strong agreement (15.56%) among the six items, suggesting that some teachers are beginning to deeply reflect on and modify their pedagogical approaches due to AI integration and shift and innovate their instructional delivery methods.

Teachers also moderately agreed that “*AI encourages innovation in instructional delivery methods*” and “*AI assists in differentiating instruction for varied learning styles*”, with 34.44% and 41.11% selecting “4,” respectively. This suggests that teachers perceive AI as a tool that can support adaptive and innovative teaching, although strong agreement (rating “5”) remained relatively low across all items.

On the opposite side, the lowest percentage of disagreement was found in the item “*AI integration has shifted the focus of my teaching from content delivery to facilitation of learning.*” where only 2.22% of respondents selected “1” (Strongly Disagree). This indicates that very few educators reject the idea that AI has influenced a shift in their teaching approach—suggesting that most teachers recognize, to some extent, AI’s role in moving instruction from traditional content delivery toward a more facilitative, student-centered model

These findings answer Research Question 4: “*How do teachers perceive the impact of AI technologies on curriculum delivery?*” Overall, the responses indicate a moderately positive perception, with most teachers recognizing that AI is influencing lesson delivery, promoting innovation, and supporting more student-centered approaches. However, the predominance of neutral responses also signals that many teachers are still navigating the practical implications of AI in curriculum design and instructional methods. This highlights the need for continued professional development and structured support to help educators fully understand and embrace the curriculum-shaping potential of AI technologies.

Table 7. Ethical and Social Concerns Related to AI

	Mean	Std. Deviation	Skewness	Kurtosis
I am concerned about data privacy when using AI tools with students.	3.922	1.134	-0.743	-0.331
I believe AI may reinforce existing biases in educational content or assessment.	3.622	1.023	-0.403	-0.168
I worry about the long-term impact of AI on students. critical thinking skills and problem-solving skills.	4.078	0.986	-0.807	-0.088
There is a lack of clear ethical guidelines for using AI in my educational institution. .	3.689	0.870	-0.078	-0.696

Table 7. Ethical and Social Concerns Related to AI

	Mean	Std. Deviation	Skewness	Kurtosis
I believe teachers need more professional training on the ethical use of AI in education.	4.233	0.887	-0.776	-0.548

Table 7 presents the ethical and social concerns teachers have regarding AI integration in education. The highest mean score (M = 4.233, SD = 0.887) was observed in the item, "I believe teachers need more professional training on the ethical use of AI in education," indicating strong agreement. This highlights a clear demand among educators for adequate training in responsible AI use.

Similarly, the concern about the long-term impact of AI on students' critical thinking and problem-solving skills also had a high mean (M = 4.078, SD = 0.986), revealing substantial apprehension. Notably, data privacy emerged as a major issue (M = 3.922, SD = 1.134), suggesting that many teachers are uneasy about the safety of student information when using AI tools. Other concerns include the potential reinforcement of existing biases (M = 3.622, SD = 1.023) and the lack of clear ethical guidelines in institutions (M = 3.689, SD = 0.870).

The skewness and kurtosis values mostly fall within acceptable ranges, indicating relatively normal distribution of responses. These results underscore that while teachers recognize AI's potential, they also call attention to the need for ethical safeguards and institutional guidance.

Table 8. Frequency Table of Ethical and Social Concern Related to AI

Likert Scale	I am concerned about data privacy when using AI tools with students		I believe AI may reinforce existing biases in educational content or assessment		I worry about the long-term impact of AI on students' critical thinking skills and problem-solving skills		There is a lack of clear ethical guidelines for using AI in my educational institution		I believe teachers need more professional training on the ethical use of AI in education	
	f	%	f	%	f	%	f	%	f	%
1	3	3.33	3	3.33	1	1.11	0	0.00	0	0.00
2	7	7.78	7	7.78	5	5.56	7	7.78	3	3.33
3	22	22.44	31	34.44	19	21.11	31	34.44	18	20.00
4	29	32.33	29	32.33	26	28.89	35	38.89	24	26.67
5	38	42.22	20	22.22	39	43.33	17	18.89	45	50.00
Missing	0	0.00	0	0.00	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>100.00</b>	<b>90</b>	<b>10.000</b>	<b>90</b>	<b>100.00</b>

Table 8 presents the frequency and percentage distribution of teachers' responses regarding ethical and social concerns related to AI in education, using a five-point Likert scale. The results show a generally high level of concern, with many respondents expressing agreement or strong agreement across all items.

The strongest concern was expressed in the item "I believe teachers need more professional training on the ethical use of AI in education," where 50.00% of respondents selected "5" (Strongly Agree) and another 26.67% chose "4" (Agree), reflecting a clear majority (76.67%) who feel underprepared and in need of guidance on ethical AI use.

A similarly strong concern is evident in "I am concerned about data privacy when using AI tools with students," with 42.22% selecting "5" and 32.33% selecting "4." This indicates that privacy is a key ethical issue for educators, possibly due to worries about student data protection and third-party AI platforms.

Concerns about bias are also evident. In the item "I believe AI may reinforce existing biases in educational content or assessment," the responses are relatively spread, but still 32.33% agreed and 22.22% strongly agreed, showing that while teachers are aware of AI's potential to introduce bias, there is slightly less consensus here than in other areas.

In terms of long-term educational outcomes, the item "I worry about the long-term impact of AI on students' critical thinking skills and problem-solving skills" had 1.11% chooses "1" (Strongly Disagree) suggesting that 1 out of 90 participants do not worry on long-term impact of AI on students' critical thinking skills and problem-solving skills the rest teachers are apprehensive about AI possibly hindering essential cognitive skill development.

These findings directly answer Research Question 4: "What are teachers' levels of concern regarding ethical and social issues associated with AI in education?" that teachers exhibit significant ethical and social concerns about AI in education, particularly in relation to data privacy, long-term cognitive effects on students, institutional guidance, and the need for ethical training. The predominance of agreement and strong agreement responses underscores a critical need for systemic policy development, institutional support, and professional development to responsibly integrate AI in educational contexts.

Table 9. Thematic Analysis on the Expectation of the Teacher’s on Artificial Intelligence inside the Classroom

Main Themes	Subthemes	Concepts
<b>1. AI as an Educational Support Tool</b>	a. Teaching Assistant	Teaching Assistant, Virtual Tutors, AI as a Guide, AI Support Not a Replacement, AI Facilitation
	b. Teaching Enhancement	Teaching Enhancement, Lesson Plan Aid, Innovative Teaching, Enhancing Teaching Talents
	c. Learning Aid	Learning Aid, AI as an Educational Assistant, AI in Enhancing Learning, AI as a Platform for Enhancement
<b>2. Personalized and Adaptive Learning</b>	a. Personalized Learning	Personalized Learning, Individualized Instruction, Real-Time Adaptation, Support for Independent Learning, User accessibility
	b. AI Adaptation	AI Adaptation, AI Integration, AI Efficiency, AI Potential
<b>3. Teacher Support and Workload Management</b>	a. Workload Reduction	Workload Reduction
	b. Teacher Support	Teacher Support
<b>4. Ethical Considerations and Responsible Use</b>	a. AI Ethics	AI Ethics, Responsible Use, Risks of Inappropriate AI Use, Caution Against Overreliance on AI
	b. Data Privacy	Data Privacy, AI Usage Limitations, Lack of Guidelines
<b>5. Impact on Student Skills and Engagement</b>	a. Critical Thinking	Critical Thinking, Creativity Limits, Critical Thinking Decline, Critical Thinking Advocacy
	b. Student Engagement	Loss of Interest, Overreliance on AI, AI Dependency, Concerns About AI and Student Evaluation

Our analysis revealed five main themes concerning teachers’ perception towards the Artificial Intelligence (AI) inside the classroom: AI as an Educational Support Tool, Personalized and Adaptive Learning, Teacher Support and Workload Management, Ethical Considerations and Responsible Use, and Impact on Student Skills and Engagement. Each theme encompasses a range of subthemes and concepts, as outlined below with participants’ quotations illustrating these points.

a.) AI as an Educational Support Tool

**Teaching Assistant:** Teachers highlighted the potential of AI to Teaching Assistant, Virtual Tutor, AI as a Guide not a Replacement, AI facilitation. Educators noted, “*AI plays an important role in the world right now especially in education but AI should only provide support in learners, and teachers, and not replace them in the future*” and “*I also hope that AI will be used responsibly—that it will serve as support, not a replacement, for teachers*”

**Teaching Enhancement:** AI serves as a **lesson plan aid**, promotes **innovative teaching strategies**, and contributes to **enhancing teaching competencies**. Teachers expressed high expectations, noting “*It can be a powerful tool to enhance teaching and improve educational outcomes for all students.*”, “*To enhance my teaching techniques and to improve my knowledge about pedagogy.*” and, “*As a teacher, AI has greatly influenced both teaching and learning when it is used properly. Therefore, I expect AI to enhance and improve the teaching and learning process, as it caters to the needs of diverse learners.*”

**Learning Aid:** AI is regarded as an educational assistant, a tool for enhancing student learning, and a platform for academic improvement. Teachers highlighted this view, stating: “*AI tools are very helpful learning aids when used appropriately. My expectation is that students will use them responsibly to enhance their learning, not to replace it.*”

b.) Personalized and Adaptive Learning

**Personalized Learning:** AI is seen as a key tool in promoting **personalized learning**, enabling **individualized instruction**, facilitating **real-time adaptation**, providing **support for independent learning and User accessibility**. Teachers expressed this expectation, stating “*I expect AI to play a supportive role in education by making learning more personalized, efficient, and accessible*”, “*AI has the potential to innovate the teaching and learning process by making it more personalized and by enhancing teaching methods to create a more engaging environment that helps students become more effective and efficient learners.*”, “*I hope that it will help students learn independently and have more positive outcomes in educational system.*” and “*I expect a user friendly AI for all kinds of user as well as easy access to learners specially marginalized group of learners.*”

**AI Adaptation:** AI is recognized for its role in adaptation, integration into the classroom, increasing educational efficiency, and unleashing learning potential. Teachers emphasized the importance of balanced and thoughtful use, noting: “*AI is making teaching easier, but a teacher should know how to adapt AI along with traditional teaching methods so that students will not become overly reliant on AI tools, especially in critical thinking.*”, “*The future role of AI in education is to expand the abilities and potential of every user or student, helping them become more advanced in their learning.*”, “*AI is of great help to our education nowadays. But*

students must be smart in using AI. Teachers should be trained on how to properly integrate AI into the classroom.”, “AI should become more efficient and effective so it can be used meaningfully in the future.”

#### c.) Teacher Support and Workload Management

**Workload Reduction:** AI is perceived as a valuable support tool for reducing teachers’ workload, particularly in tasks such as lesson planning and assessment creation. Teachers acknowledged its benefits while also emphasizing the importance of balance, stating: “For me, it is an aide to teachers in lessening workload, especially in writing lesson plans and making assessments.” and “As a teacher, it cannot be denied that AI tools make a significant contribution to teaching, but there needs to be a limit to their use. We cannot solely rely on AI tools; it is still best to use our own minds when teaching children.”

**Teacher Support:** AI is seen as a means to enhance teaching effectiveness when used appropriately. Educators also emphasized the need for professional development to ensure proper use. One teacher noted: “Teaching becomes more effective with the use of AI when applied in the right way. I hope that someday, training, seminars, and workshops will be conducted so that we, as teachers, can use AI efficiently.”

#### d.) Ethical Considerations and Responsible Use

**AI Ethics:** Teachers underscored the importance of the responsible use of AI, highlighting the risks of inappropriate use, the need for caution against overreliance, and concerns related to assessment integrity. While they acknowledged AI’s potential to support globally competitive learners, they also pointed out several challenges, including the lack of clear guidelines and insufficient teacher preparedness. As educators expressed: “If properly utilized, it will create globally competitive learners. However, there are no clear guidelines on how to use or integrate this technology in the teaching-learning process. Many teachers are also hesitant and not technologically driven.”, “As an educator, I’m expecting that we should be responsible enough in using AI.”, “As a teacher, my expectations regarding the future role of AI in education are that teachers should help students recognize that AI can assist in brainstorming, summarizing, and analyzing—but it cannot replace human creativity, ethics, or critical decision-making. Incorporating ethical AI discussions into the curriculum ensures students will learn to use AI responsibly and effectively.”, “It may be the key to more effective teaching, but it can also have negative effects on students if not used properly.”

Teachers emphasized the importance of establishing **clear limitations on AI usage** and the need for **comprehensive guidelines** to ensure ethical and secure integration in the classroom. They recognized AI’s benefits but stressed the importance of responsible implementation. As educators noted: “While AI offers numerous benefits it also raises concerns about data privacy, it is crucial to address these issues to ensure that AI is used ethically and responsibly in education.”, “There should be a guide for proper analysis and for providing accurate information to students.”, “It can be helpful if used appropriately. We just need to maximize the positive ways AI can contribute to our teaching process, while also setting justifiable limitations.”, “As a teacher, it cannot be denied that AI tools have made significant contributions to teaching, but there needs to be a limit to their use. We cannot solely rely on AI tools—it is still better to use our own minds in teaching children.” limit to their use. We cannot solely rely on AI tools; it is still better to use our own minds in teaching the children”.

#### e.) Impact on Student Skills and Engagement

**Critical Thinking:** While AI is acknowledged as a valuable tool for expanding learning opportunities and leveraging modern technology, teachers expressed concern over its potential to limit creativity and contribute to a decline in students’ critical thinking skills. They advocated for the intentional promotion of critical thinking alongside AI integration. As educators noted: “AI is a great platform for both teachers and students to explore different dimensions of learning, as it maximizes the advantages of modern technology. The only problem is that we tend to become dependent on this platform—especially students—which leads to a lack of critical thinking and comprehension.” and “Overdependence on AI could also hinder the development of critical thinking and creativity among students.”

**Student Engagement:** Teachers expressed growing concern over the impact of AI on student motivation, highlighting issues such as loss of interest in learning, overreliance on AI tools, and challenges related to authentic student evaluation. While AI offers support in learning, educators cautioned against its misuse and the resulting decline in student effort and engagement. As noted by teachers: “It is becoming difficult to assess written tasks due to the rise of AI, and students are becoming increasingly dependent on these tools to complete their schoolwork.”, “Over time, children may gradually lose interest in studying due to increased reliance”

The analysis answered the teacher’s expectation, as what one educator quote on AI tools “AI nowadays is very alarming, because most students are fully relying on AI—specifically ChatGPT. AI should serve only as a guide or support, but we should never fully rely on it. Let’s use our brains first before using AI.” The teachers generally acknowledge the benefits of AI in enhancing teaching and learning, particularly in improving efficiency, supporting instruction, and offering personalized learning experiences. However, they also expressed concerns about overreliance on AI, potential declines in student critical thinking and engagement, lack of clear implementation guidelines, and the ethical implications of its use. While there is optimism about AI’s role in education, teachers emphasized the importance of responsible use, proper training, and maintaining a balance between technology and traditional teaching methods.

The high average of (M= 3.156) on ‘To what extent have teachers used AI tools or resources in their teaching practices?’ was explained by quantitative responses Teachers are increasingly inclined to use AI tools for interactive and participatory purposes in their classrooms, particularly because such technologies can adapt dynamically to student interactions within the game—adjusting difficulty levels and challenges in real time—which helps maintain engagement and motivation among learners (J. Hamari, et al., 2019). While qualitative responses, supported that teachers’ expectations on Artificial Intelligence inside the classroom in the future education is seen as academic improvement aid and a key tool in promoting personalized learning, enabling individualized instruction and boost student engagement and collaboration. However, their expectations were not uniformly optimistic. Some educators, envisioned a future education with integration of AI where AI will be reason student’s will lose interest in learning,

overreliance on AI tool that may lead our learners to limit their critical thinking. Kim, N. J., et al (2022) highlighted on their analysis that some educators' also questioned the accuracy and reliability of the information generated by the system. In terms of 'What are teachers' perceived benefits and challenges of integrating AI into educational practices?' teachers acknowledged the positive impact of AI on teaching effectiveness, personalized learning, and student engagement with  $M = 3.389$  as revealed in quantitative responses. Also, with high average of  $M=3.700$  it shows that infrastructure limitations are a significant challenge perceived by educators. Infrastructures such as Internet Access, High-end ICT tools, and etc., highlights a practical barrier that could hinder the full adoption of AI tools, regardless of their potential benefits. In support to the perceived benefits of the educators, teachers' expectations on AI inside the classroom are to increase educational efficiency, unleashing student's engagements and potentials. In terms of work load management, educators see the AI as a great help in reducing tasks such as lesson planning, instructional materials and assessment creation. Yet, in recent findings of (Cojean et al., 2022)., educators generally perceive AI-integrated technologies as contributing less to their workload compared to more traditional tools. Although these innovations are not necessarily believed to reduce workload outright, they are nonetheless seen as less demanding. Similar views have been reported in prior research conducted in the field of physics (Ahmed et al., 2022; Asmatahasin et al., 2021; Pinto dos Santos et al., 2019), where professionals acknowledged the practical advantages of AI tools, yet remained unconvinced about the possibility of such systems replacing human roles. In parallel to that, qualitative responses revealed that at the back of educator's mind's it is dominant to them not to rely much on AI technologies as one of teacher quoted "It is best to use our own minds when teaching children"

Teachers' perceptions of AI's influence on curriculum delivery were moderately positive with  $M=3.478$ , as quantitative responses revealed that with the integration of AI some or/to many teachers led to rethink and update their methods of teachings indicating that AI inside the classroom promotes reflective teaching practices. Followed closely by  $M=3.467$  and  $M=3.411$  that highlights AI supports adaptive and innovative teaching methods. In parallel, qualitative responses from educators expressed a high expectation on AI in the future education that AI would promote a better innovative teaching strategies and contributes to enhancing teaching competencies. Nevertheless, educators also highlighted in a qualitative response that AI may be powerful tool that could assist educators in delivering lesson but AI technologies cannot replace human mind or teachers. As of Flores-Vivar, J.-M., & García-Peñalvo, F.-J. (2023) argue that artificial intelligence cannot serve as a true source of inspiration for learning, emphasizing that the empathetic connection provided by human teachers plays a crucial role in the teaching-learning process. They identify this lack of inspirational and emotional engagement as a fundamental limitation of AI-driven education—and the primary reason AI will not fully replace human educators.

To 'What are teachers' levels of concern regarding ethical and social issues associated with AI in education' with a highest average of  $M=4.233$  indicating a strong agreement on the demand for professional development focused on responsible AI use, alongside significant worries about the long-term effects of AI on students' critical thinking and problem-solving skills with  $M=4.078$ . Additionally, data privacy emerged as a major issue that teachers felt uneasy about the safety of student information when using AI tools, that AI have a potential reinforcement of existing biases as to Chiu (2023), AI technologies have been observed to reflect and potentially reinforce societal biases—such as those related to religion, culture, gender, or race—due to the nature of the data on which they are trained. In educational settings, this presents a significant concern, as unchecked biases can be amplified and embedded within learning environments. As qualitative analysis revealed, teacher's expectations emphasized that it is important to establish a clear limitation on AI usage and the need for comprehensive guidelines to ensure ethical and secure integration of AI technologies in the classroom. Chiu (2023) mentioned that to mitigate these risks, it is critical to implement strategies that address and monitor bias in AI applications. Furthermore, because the output from these systems may not always be dependable or accurate, it is increasingly important to equip learners with competencies like media literacy, enabling them to assess and verify information critically.

According to Aghaziarati, A., et al, (2023), perceptions of AI in Education revealed varied Attitudes towards AI, ranging from optimism to skepticism, with teachers expressing both excitements for the potential benefits and concerns over the implications of AI integration. Awareness and Understanding pointed to a gap in knowledge about AI capabilities, highlighting the need for informative resources and training. The Impact on Professional Identity category reflected on how AI is reshaping the roles and self-conception of educators, offering both challenges and opportunities for professional growth and development.

Exploring teacher attitudes toward AI in education highlights a critical turning point in the development of teaching and learning. The results underscore AI's transformative capabilities, positioning it as a powerful tool for personalizing instruction, streamlining administrative tasks, and enhancing teaching methods. Nonetheless, the successful implementation of these technologies depends on addressing educators' specific concerns, promoting ethical practices, and cultivating a culture that supports digital literacy and innovation. This research marks an essential step toward understanding and managing the challenges of AI integration in education, underlining the crucial role of teacher involvement in this shift toward technologically driven learning environments.

## CONCLUSION

In today's rapidly evolving world, technology has become an integral part of our daily lives. In the realm of education, it's undeniable that teachers play a crucial role in the success of the teaching and learning process. As such, it is essential for teachers to be equipped with the latest technologies in order to create a successful learning environment.

Teachers have begun to integrate AI tools into their teaching practices to a moderate extent, primarily using them to support interactive and student-centered learning experiences. Many educators recognize the potential of AI to enhance instruction, personalize learning, and boost student engagement. However, their adoption remains measured due to concerns about overreliance on technology, the possible decline in students' critical thinking, and doubts about the reliability of AI-generated content. These findings suggest that while there is growing interest in the use of AI in education, teachers remain cautious and emphasize the need for thoughtful and responsible integration.

Teachers perceive several benefits in integrating AI into educational practices, including enhanced teaching effectiveness, personalized learning, increased student engagement, and assistance with instructional tasks such as lesson planning and assessment creation. These tools are seen as supportive rather than transformative, offering practical help without fully replacing human roles.

However, significant challenges persist, particularly infrastructure limitations like inadequate internet access and lack of advanced ICT tools. Additionally, educators express caution about overdependence on AI, emphasizing the importance of maintaining human judgment and critical thinking in teaching. These insights reflect a balanced perspective: while teachers recognize AI's potential to improve educational outcomes, they advocate for its careful, well-supported, and ethical implementation.

Teachers perceive the impact of AI on curriculum delivery as generally positive, noting that it encourages more reflective, adaptive, and innovative teaching practices. Many see AI as a tool that can support curriculum updates and enhance instructional methods by offering new ways to engage students and personalize learning. However, these perceptions are tempered by the belief that AI cannot replace the human aspects of teaching, such as emotional connection and inspiration. While AI is viewed as a valuable aid in delivering lessons, educators emphasize the continued importance of teacher presence and judgment in shaping meaningful learning experiences.

Teachers express a high level of concern regarding the ethical and social implications of AI in education, particularly emphasizing the need for professional development on responsible AI use. Major issues include the potential erosion of students' critical thinking skills, risks to data privacy, and the reinforcement of societal biases embedded in AI systems. Educators stress the importance of setting clear boundaries for AI integration and developing comprehensive guidelines to ensure its ethical use. There is also a strong call to equip students with media literacy skills to critically evaluate AI-generated content, reflecting teachers' desire to safeguard the integrity and fairness of educational environments in the face of rapidly advancing technologies.

Teachers envision AI as a powerful support tool in education, with high expectations for its ability to enhance teaching effectiveness, personalize learning, and reduce workload. They see AI as a valuable aid—offering innovative strategies, real-time adaptation, and greater accessibility—while emphasizing that it should complement, not replace, human instruction. Despite the optimism, teachers express caution about overreliance on AI, highlighting concerns over diminished student critical thinking, loss of engagement, and ethical issues such as data privacy and bias. Ultimately, teachers expect AI to play a meaningful role in the classroom, provided its integration is guided by clear policies, ethical standards, and professional development to ensure responsible and effective use.

Complementing these findings, the qualitative analysis focused on teachers' expectations of AI's future role in education. While many educators expressed optimism about AI as a support tool for personalized and efficient instruction, they also voiced caution about overreliance, loss of student motivation, and the irreplaceable role of the human teacher. Expectations reflected a desire for responsible and balanced AI integration — one that enhances but does not overshadow human-driven pedagogy.

Together, the findings indicate that while educators are increasingly open to using AI tools, successful adoption requires careful consideration of ethical, practical, and pedagogical factors, with particular attention to teacher training, and clear implementation frameworks. As such, this study serves as a foundational step towards comprehending and navigating the complexities of integrating AI in educational practices, emphasizing the importance of teacher engagement in this technological paradigm shift.

## RECOMMENDATION

Based on the results of this study, the following recommendations are proposed to support the responsible and effective integration of AI in education:

To support the responsible and effective integration of AI in education, it is recommended that schools and education authorities provide comprehensive teacher training, ensure access to necessary infrastructure, and establish clear ethical guidelines. These efforts should focus on helping teachers harness AI's potential to enhance instruction and personalize learning, while also safeguarding critical thinking, student engagement, and data privacy. AI should be positioned as a supportive tool—not a replacement—for human teaching, with balanced use encouraged through well-informed policies and professional development. Future researchers are encouraged to explore the long-term impact of AI integration on student learning outcomes, critical thinking, and teacher-student interactions. Comparative studies across different educational levels, subject areas, and regions may provide deeper insights into effective practices and challenges. Additionally, further research on ethical implementation, bias mitigation, and the development of student media literacy in AI-rich environments will be valuable in shaping responsible and equitable use of AI in education.

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