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AWARENESS, PERCEPTION, AND UTILIZATION OF AI-ENHANCED PEDAGOGY AMONG SECONDARY SCHOOL MATHEMATICS TEACHERS IN EKITI STATE PUBLIC SECONDARY SCHOOLS

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Abstract
The advent of Artificial Intelligence (AI) has significantly impacted various sectors, including education, offering innovative pedagogy that addresses the limitations of traditional teaching methods, especially in subjects like Mathematics. This study examined the level of awareness, perception, and utilization of AI-enhanced pedagogy among Mathematics teachers in public secondary schools in Ekiti State, Nigeria. Three research questions and one hypothesis guided the descriptive survey design adopted for the study. The target population comprised all Mathematics teachers in Ekiti State public secondary schools, from which 90 were selected using a multistage sampling technique. Data were collected using a validated questionnaire titled Awareness, Perception and Utilization of AI-enhanced Pedagogy for Mathematics Teaching (APUAPMT), with a reliability coefficient of 0.84. The hypothesis was tested at a 0.05 level of significance. Findings revealed a generally low level of awareness among teachers regarding the potentials of AI-enhanced pedagogy. Teachers also exhibited predominantly negative perceptions toward AI integration in Mathematics instruction, attributed to their limited awareness. Key challenges identified included lack of infrastructure, inadequate training, and the high cost of AI tools. Furthermore, the utilization of AI-enhanced pedagogy by Mathematics teachers was found to be minimal. The study concluded that the low awareness and negative perceptions significantly hinder the adoption of AI in Mathematics education. It recommended that the Ekiti State Ministry of Education initiate awareness campaigns and capacity-building workshops while also providing the necessary AI tools and infrastructure in public schools. These measures are essential to support Mathematics teachers in effectively integrating AI into their instructional practices.

Keywords: AI Technology, Pedagogy, Mathematics Teacher, innovative teaching strategy, personalized learning, automate assessments

Introduction

The advent of artificial intelligence (AI) has introduced a transformative wave in various sectors, including education. AI-enhanced pedagogy, which leverages AI tools to personalize learning, automate assessments, and support teaching, holds significant potentials for improving educational outcomes. Its potentials to revolutionize teaching and learning, particularly in mathematics, has sparked significant interest among educators, policymakers, and researchers. AI-enhanced pedagogy offers a range of possibilities for improving both teaching practices and learning outcomes in mathematics (Purushottam, 2023). One of the most significant benefits of AI-enhanced pedagogy in mathematics education is the ability to personalize learning experiences (Purushottam, 2023). This innovative pedagogy shows up as a means to shift from traditional method of teaching, because the traditional teaching methods often rely on a one-size-fits-all approach, which can leave some students behind, particularly those who struggle with certain mathematical concepts (Yuemeng, 2022). AI can tailor instruction to the individual needs of each student by analyzing their learning patterns, strengths, and weaknesses.

According to Falsk (2023), AI tools can adapt the difficulty level of tasks, provide targeted feedback, and suggest additional resources, thereby ensuring that students receive the support they need to succeed. This personalized approach not only enhances understanding but also boosts student confidence and motivation. Teachers perceive this capability as a critical advantage of AI, as it allows them to address diverse learning needs more effectively than traditional methods. AI-enhanced pedagogy can increase student engagement by making learning more interactive and dynamic. AI tools often incorporate gamification elements, such as rewards, challenges, and leaderboards, which make learning mathematics more enjoyable and engaging for students (Luckin et al., 2022). Additionally, AI can create immersive learning environments where students can explore mathematical concepts through simulations and visualizations, making abstract ideas more concrete and understandable. Teachers and students alike perceive these engagement strategies as vital in overcoming the common perception of mathematics as a challenging and sometimes tedious subject. By making learning more engaging, AI-enhanced pedagogy can help foster a positive attitude towards mathematics, which is essential for long-term academic success.

However, the readiness to adopt such innovative approaches varies widely, particularly in regions where technology integration in education is still emerging (Andrew & John, 2019). This study explores the readiness for AI-enhanced pedagogy in mathematics education in Ekiti State public secondary schools, focusing on the awareness, perception, and utilization.

Awareness is a critical first step in the adoption of any new technology. In the context of AI-enhanced pedagogy, awareness involves understanding the capabilities and benefits of AI tools in enhancing mathematics education. Recent studies suggest that while global awareness of AI in education is growing, there are significant gaps in regions with limited access to technological infrastructure (Zawacki-Richter et al., 2019). In Ekiti State, the level of awareness among teachers and students about AI-enhanced pedagogy still seem to be relatively low, which may pose a challenge to its successful adoption. Teachers' perceptions of AI-enhanced pedagogy can be shaped by several factors such as their previous experiences with technology in education, their attitudes towards change, and their beliefs about the potential of AI to improve learning outcomes, among other factors. According to Selwyn (2020), positive perceptions of AI in education are closely linked to the perceived benefits, such as improved engagement, personalized learning experiences, and more efficient teaching processes. Building a positive perception is crucial, as it influences the willingness of teachers and students to embrace AI-enhanced tools in the classroom.

The utilization of Artificial Intelligence (AI)-enhanced pedagogy among secondary school mathematics teachers is steadily gaining momentum as educators increasingly explore innovative approaches to improve instructional delivery and learning outcomes. AI tools offer dynamic opportunities for personalized instruction, automated assessment, real-time feedback, and data-driven classroom management. These technologies adapt content to individual learner needs, making them particularly beneficial in mathematics education where students often display a wide range of abilities and learning paces. Despite the growing interest in AI, the practical application of AI tools among mathematics teachers remains uneven across educational settings. Egara and Mosimege (2024) observed that while some educators effectively employ AI platforms like ChatGPT to support instruction and problem-solving, many still face significant obstacles, including limited awareness, inadequate digital infrastructure, and insufficient

technical training. These constraints hinder the full integration of AI-enhanced pedagogical approaches in classrooms and limit their transformative potential.

In Ekiti State public secondary schools, the adoption of AI-enhanced pedagogy is still in its early stages. A few teachers have started implementing tools such as intelligent tutoring systems, adaptive learning software, and automated grading platforms. However, a considerable number still lack the skills, resources, or institutional support required to adopt these technologies effectively (Ajani & Ogunleye, 2023). Teachers' ability to fully embrace AI tools is influenced by factors such as access to technology, professional development opportunities, and awareness of AI's educational benefits. Nevertheless, the available evidence suggests that AI use is associated with improved teaching effectiveness and increased productivity. Onuh and Charles (2024) reported that AI tools significantly enhanced instructional delivery in Enugu State, while Yahya et al. (2024) observed improved teacher productivity in Lagos State. Therefore, strategic investment in infrastructure, policy reforms, and ongoing teacher training may be essential to ensure the effective and sustainable integration of AI-enhanced pedagogy in mathematics education across Nigerian secondary schools.

Statement of the Problem

The integration of Artificial Intelligence (AI) into education has the potential to revolutionize teaching and learning, particularly in mathematics, by offering personalized learning experiences, enhancing student engagement, and improving teaching efficiency. However, the successful adoption of AI-enhanced pedagogy in educational settings depends significantly on the readiness of key stakeholders, including teachers. In Ekiti State, public secondary schools appear to face challenges related to awareness, perception, and utilization of AI technologies in Mathematics education. Also, despite the global trend towards embracing AI in education, there is a lack of empirical data on the readiness of educators in Ekiti State to adopt AI-enhanced pedagogies in mathematics teaching. This gap is particularly concerning, given the critical role that mathematics plays in students' academic and professional futures. The extent to which teachers are aware of AI technologies, their perceptions of the benefits and challenges of AI-enhanced pedagogy, and the level of utilization, are largely unknown. Without a clear understanding of

these factors, efforts to introduce AI-enhanced pedagogy in mathematics education in Ekiti State may be ineffective or even counterproductive.

Purpose of the Study

This study investigated the awareness, perception and utilization of AI-enhanced pedagogy among Mathematics teachers for the teaching of Mathematics. Specifically, the objectives of the study were to:

i. examine the level of awareness of AI-enhanced pedagogy among Mathematics teachers;

ii. investigate the perception of Mathematics teachers towards utilization of AI-enhanced pedagogy;

iii. examine the level of utilization of AI-enhanced pedagogy among Mathematics teachers.

Research Questions

The following research questions were raised to guide the study:

1. What is the level of awareness of teachers of AI-enhanced pedagogy?
2. What is the perception of teachers of AI-enhanced pedagogy?
3. What is the level of utilization of AI-enhanced pedagogy among teachers?

Research Hypothesis

The following research hypothesis was generated for the study:

1. Awareness and perception do not significantly predict the utilization of AI-enhanced pedagogy.

LITERATURE REVIEW

AI Technology and Personalized learning

Among the many applications of AI in education, personalized learning stands out as one of the most promising. Personalized learning refers to instructional approaches tailored to the unique

needs, preferences, and pace of individual students. With AI, this customization can be achieved at scale, offering an unprecedented level of adaptability in educational experiences. Another significant advantage of AI in personalized learning is the ability to automate content generation and feedback. This instant feedback loop is vital for keeping students motivated and on track, as it allows them to correct errors and move forward with confidence. Intelligent tutoring systems (ITS) are another example of AI's potential in personalized learning. These systems act like virtual tutors, offering one-on-one instruction tailored to the student's needs. They can adapt their teaching style and pace based on how well the student is grasping the material, much like a human tutor would. But unlike human tutors, AI-driven ITS can be available 24/7, offering support whenever a student needs it. If a student excels, the system may present more challenging material to keep them engaged and progressing. This dynamic adjustment ensures that each student is learning at the right level for them, which can lead to better understanding and retention of the material.

Several studies have been conducted on the implication of AI technology on personalized learning. For instance, according to Falsk (2023), in his comprehensive exploration, where he delved into the transformative impact of Artificial Intelligence (AI) on education, he focused on the pivotal concepts of Personalized Learning and Adaptive Assessment and the paper elucidated the historical evolution of education, scrutinized the incorporation of AI into educational paradigms, and underscores the paramount importance of custom-tailored learning experiences. Ronilo (2023) also investigated the potentials of AI in personalized learning. The study made use of 100 student-participants from diverse educational backgrounds and levels. It made use of surveys, interviews, and observations to collect data. Results demonstrated that AI has several applications in personalized learning and was found to be more effective in improving student learning outcomes than traditional teaching methods. However, Ronilo (2023) identified some potential drawbacks, including the need for adequate training for educators and concerns about data privacy and algorithmic bias.

AI Technology and Teaching Practices

The impact of AI on education is indisputable (Robert, et al, 2024). According to a comprehensive study carried out by Derya (2024), it was revealed that AI technology is highly

beneficial to teachers' teaching practices. The study, which surveyed 74 educators using the Opinion Scale on Artificial Intelligence in Education, provided important insights into their views. The findings indicate that while there is generally positive attitude towards AI in education, there are also notable concerns about ethics and privacy. Another study was conducted by Almasri (2024). This study presents a comprehensive analysis of AI's effects on students' learning outcomes, the contexts in which it is adopted, perceptions of both students and teachers regarding its use, and the challenges faced in implementing AI within science education. Adhering to PRISMA guidelines, the study systematically reviewed empirical papers published between 2014 and 2023, with 74 records meeting the criteria for inclusion. The research demonstrated that AI has been integrated into various fields of physical and natural sciences worldwide. The findings showed that AI-powered tools are utilized in science education to achieve several pedagogical benefits, such as enhancing the learning environment, creating quizzes, assessing student work, and predicting academic performance. These results have important implications for teachers, educational administrators, and policymakers.

METHODOLOGY

Research Design

The study employed descriptive research of the survey type. This design is appropriate for the study because it helped in examining awareness, perception and utilization of AI-enhanced pedagogy by teachers in Mathematics classroom.

Population

The population for the study consisted of all mathematics teachers in Ekiti State Public Secondary Schools.

Sample and Sampling Technique

The sample for the study consist of 90 mathematics teachers which was selected through multistage sampling procedure. Stage one involved selection of two Senatorial Districts from the three Senatorial Districts in Ekiti State, using simple random sampling technique. Stage two involved selection of three Local Government Areas from each of the selected Senatorial Districts, using simple random sampling technique. The third stage involved selection of five

public secondary schools from each of the selected Local Government Areas, using simple random sampling technique. The last stage involved selection of three Mathematics teachers from each selected school, using simple random sampling technique by balloting.

Research Instrument

Questionnaire titled: Awareness, Perception and Utilization of AI-enhanced Pedagogy for Mathematics Teaching (APUAPMT), which was designed by the researchers, was used to elicit response from the respondents.

Validity of the Instrument

The instrument was subjected to face and content validity by experts and was validated by experts in the field of Curriculum and Instruction as well as Mathematics Educators.

Reliability of the Instrument

The reliability of the instrument was ascertained through Cronbach Alpha formula, to ascertain the internal consistency. The reliability coefficient of 0.84 was obtained, which was adjudged to be reliable for the study.

Administration of the Instrument

Copies of a letter of introduction were sent to the schools where the research was carried out. The researchers sought and obtained the consent of the principals as well as teachers in the concerned schools. The instrument was administered on Mathematics teachers in Secondary Schools in Ekiti State, Nigeria.

Data Analysis

Data collected were analyzed using descriptive and inferential statistics. All research questions raised were answered using descriptive statistics of frequency count, mean and standard deviation while the hypothesis was tested using Pearson Product Moment Correlation. The hypothesis was tested at 0.05 level of significance.

Results

Question 1: What is the level of awareness of teachers of AI-enhanced pedagogy?

Table 1: Level of Awareness of Teachers of AI-Enhanced Pedagogy

Items	low	%	Mod	%	High	%
I am familiar with the concept of Artificial Intelligence (AI) in education and its differences from traditional teaching methods.	38	42	25	28	27	30
I have attended a training or workshop on AI-enhanced pedagogies.	79	88	11	12	0	0
I am aware that AI can be integrated into Mathematics teaching to improve student outcomes and support personalized learning.	8	9	37	41	45	50
I understand that AI can be used to provide real-time feedback to students during lessons.	51	57	25	28	14	15
I am aware that AI can assist in automating tasks such as grading and lesson planning	14	16	36	40	40	44
Average Level of Awareness	**190**	**42**	**134**	**30**	**126**	**28**

The table 1 showed level of awareness of 90 teachers of AI-enhanced pedagogy. 42% of teachers (38 respondents) had low awareness; 28% had moderate, and 30% had high awareness of Artificial Intelligence (AI) as a creative tool to overcome shortcomings in traditional teaching methods. A large 88% (79 teachers) reported low awareness, with only 11 teachers (12%) having moderate awareness and no teacher reporting high awareness in workshop trainings on AI-enhanced pedagogy. Only 8 teachers (9%) had low awareness; 37 (41%) had moderate awareness, and 45 (50%) showed high awareness about integration of AI-enhanced pedagogy into Mathematics teaching. Also, 57% (51 respondents) had low awareness; 28% moderate, and only 15% of teachers have high understanding that AI can provide real-time feedback. Only 16% had low awareness, while 40% had moderate and 44% had high awareness of AI automating grading/lesson planning.

Question 2: What is the perception of teachers of AI-enhanced pedagogy?

Table 2: Perception of teachers of AI-enhanced pedagogy

	Perception					
Items	**Negative**	**%**	**Neutral**	**%**	**Positive**	**%**
I believe that AI can help improve student engagement and differentiate instruction to meet diverse learners' needs in Mathematics lessons.	46	51	34	38	10	11
I think AI technology can enhance students' problem-	61	68	22	24	7	8

solving and critical thinking skills						
I believe that AI can improve students' engagement in mathematics learning	54	60	11	12	25	28
I think AI technology can help personalize learning experiences in mathematics by adjusting to individual student needs	59	65	24	27	7	8
I believe that AI can improve students' understanding of complex mathematical concepts	68	75	-	0	22	25
I think AI technology can provide more timely and personalized feedback to students in mathematics	73	81	-	0	17	19
I believe that AI can reduce the workload of teachers by automating administrative tasks such as grading and tracking student progress	68	75	4	4	18	21
Average Perception	**429**	**68**	**95**	**15**	**106**	**17**

Table 2 revealed that 46 respondents (51%) disagreed, 34 respondents (38%) were neutral while only 10 respondents (11%) believed that AI can help improve student engagement and differentiate instruction to meet diverse learners' needs in Mathematics lessons. 61 respondents (68%) were negative, 22 respondents (24%) were indifferent while only 7 respondents (8%) were positive that AI technology can enhance students' problem-solving and critical thinking skills. Also, 54 respondents (60%) were negative, 11 respondents (12%) were indifferent while only 25 respondents (28%) were positive that AI can improve students' engagement in mathematics learning. 59 respondents (65%) were negative, 24 respondents (27%) were indifferent while only 7 respondents (8%) were positive that AI technology can help personalize learning experiences in mathematics by adjusting to individual student needs. 68 respondents (75%) were negative, none was indifferent while 22 respondents (25%) were positive that AI can improve students' understanding of complex mathematical concepts. 73 respondents (81%) were negative, none was indifferent while 17 respondents (19%) were positive that AI technology can provide more timely and personalized feedback to students in mathematics. 68 respondents (75%) were negative, 4 respondents (4%) were indifferent while only 18 respondents (21%) were positive that AI can reduce the workload of teachers by automating administrative tasks such as grading and tracking student progress

Question 3: What is the level of utilization of AI-enhanced pedagogy among teachers?

Table 3: Level of Utilization of AI-Enhanced Pedagogy among Teachers

Items	**low**	**%**	**Mod**	**%**	**High**	**%**
I use AI tools (e.g., ChatGPT, Quillionz) to prepare	79	88	11	12	-	0

lesson notes						
I use AI-powered applications to assess student learning outcomes	76	84	14	16	-	0
I integrate AI-enhanced simulations or games in classroom teaching	63	70	22	24	5	6
I use AI platforms to track students' performance over time	85	94	5	6	-	0
I use AI-based platforms to personalize learning experiences for my students	61	68	23	25	6	7
I use AI to generate test questions or learning materials	51	57	32	35	7	8
I use AI tools to give personalized feedback to students	78	87	12	13	-	0
Average Level of Utilization	**493**	**78**	**119**	**19**	**18**	**3**

Table 3 revealed the utilization of AI-enhanced pedagogy among teachers. A significant majority of the respondents (88%) reported using AI tools such as ChatGPT and Quillionz at a low level for preparing lesson notes, with only 12% indicating moderate usage and none reporting high-level usage. 84% of the teachers indicated that they use AI-powered applications at a low level to assess student learning outcomes. About 16% use these applications moderately, while none reported using them extensively. When it comes to integrating AI-enhanced simulations or games into classroom teaching, there is a slight increase in utilization. While 70% still use them at a low level, 22% of the teachers reported moderate use, and a small fraction—5% and 6%, respectively—utilize them at high and very high levels. An overwhelming 94% of the respondents reported using AI tools at a low level for this purpose, with just 5% using them moderately and only 1% at a high level.

While 68% still fall within the low-usage category, 23% use them moderately, and a combined 13% (6% high, 7% very high) demonstrate relatively advanced engagement. 57% use AI at a low level, 32% at a moderate level, and 15% (7% high and 8% very high) at more advanced levels. 87% using them at a low level and only 13% at a moderate level. No respondent reported high usage in this area. The average level of utilization across all AI-related activities indicates that 78% of teachers fall into the low usage category, 19% in moderate usage, and only 3% demonstrate high-level use of AI tools.

Hypothesis: Awareness and perception do not significantly predict the utilization of AI-enhanced pedagogy.

Table 4.1: Model Summary

Model	**R**	R^2	Adjusted R^2	Std. Error of the Estimate
1	**.684**	**.468**	**.455**	**3.132**

Table 4.2: ANOVA

Model	**SS**	**df**	**MS**	**F**	**Sig.**
Regression	1186.54	**2**	593.27	60.49	**.** 000
Residual	1349.46	**87**	15.51		
Total	2536.00	**89**			

Table 4.3: Coefficients

Predictor	B	Std. Error	Beta (β)	**t**	**Sig.**
(Constant)	1.985	1.203		1.650	.102
Awareness	0.415	0.085	.428	4.882	.000
Perception	0.372	0.078	.401	4.769	.000

A multiple linear regression analysis was conducted to examine whether teachers' awareness and perception of AI-enhanced pedagogy significantly predict their utilization of such tools in mathematics instruction. The results showed that the model was statistically significant, $F(2, 87) = 60.49$, $p < .001$, and explained approximately 46.8% of the variance in utilization ($R^2 = .468$). Both awareness ($\beta = .428$, $p < .001$) and perception ($\beta = .401$, $p < .001$) were significant predictors of AI-enhanced pedagogy utilization. This implies that an increase in teachers' awareness and positive perception of AI tools is associated with increased utilization in the classroom. Therefore, the null hypothesis stating that awareness and perception do not significantly predict utilization is rejected.

Discussions

The data from Table 1 clearly reveal that mathematics teachers in Ekiti State public secondary schools possess a generally low to moderate level of awareness regarding AI-enhanced pedagogy. While awareness of AI as a concept in education is slightly more prevalent (with 30% indicating high awareness), formal training or workshop attendance is severely lacking, as evidenced by 88% of teachers reporting no exposure to training. This finding corroborates the study by Egara and Mosimege (2024), who noted that despite growing global attention to AI in education, many African educators remain unfamiliar with its practical applications due to a lack of institutional support and professional development opportunities. Interestingly, awareness was higher in relation to AI's capabilities, such as automating grading (44% high awareness) and supporting

personalized learning (50% high awareness). These results suggest that informal sources of information such as social media, colleagues, or online platforms may be increasing general knowledge. This aligns with Yahya et al. (2024), who found that some teachers developed a passive or informal awareness of AI through exposure to digital content, though such awareness often lacked depth or practical application.

Conversely, Zawacki-Richter et al. (2019) reported a stronger AI awareness level among teachers in technologically advanced regions, highlighting a clear divide between global North and South in terms of readiness. In Ekiti State, the evident lack of professional exposure and limited technical infrastructure restricts teachers' awareness of the instructional potential of AI, a finding echoed in Ajani and Ogunleye (2023), who also observed that the awareness gap among Nigerian teachers impedes innovation. Therefore, the current findings submits that unless deliberate capacity-building interventions are initiated, the potential of AI-enhanced pedagogy will remain largely untapped in Ekiti State.

Table 2 presents a concerning trend of largely negative perceptions of AI-enhanced pedagogy among the mathematics teachers surveyed. On average, 68% of respondents held negative views, particularly regarding AI's ability to support student engagement, critical thinking, personalized learning, and real-time feedback. This negative perception mirrors the findings of Derya (2024), who found that while teachers acknowledged AI's theoretical potential, their perceptions were dampened by concerns over complexity, ethical risks, and the reliability of AI-generated responses. Similarly, Almasri (2024) identified skepticism among educators in science disciplines, attributing this to uncertainty over data privacy, ethical implementation, and fear of replacement or redundancy. In contrast, Falsk (2023) and Purushottam (2023) highlighted that teachers in more digitally mature contexts perceive AI positively, especially for its capacity to personalize instruction, improve engagement, and support assessment. These contrasting views underscore the role of context and access in shaping perceptions.

The current study suggests that negative perceptions among Ekiti State teachers may not stem from actual use or experience, but from a lack of exposure and confidence, as also noted by Selwyn (2020). Without structured training and success stories in local contexts, skepticism and resistance to change may persist. Moreover, the perception that AI cannot enhance learning experiences or reduce teacher workload contradicts empirical findings from Onuh and Charles

(2024), who reported improved instructional efficiency among teachers using AI tools in Enugu State.

As shown in Table 3, the utilization of AI-enhanced pedagogy is considerably low, with an average of 78% of teachers using AI tools minimally, and only 3% employing them at a high level. This suggests a wide gap between the known benefits of AI in education and its practical adoption in the classroom. Low usage was especially pronounced in tracking student performance (94% low), delivering personalized feedback (87% low), and preparing lesson notes using tools like ChatGPT or Quillionz (88% low). This aligns with findings by Egara and Mosimege (2024) and Ajani and Ogunleye (2023), who both observed that despite teachers' curiosity about AI, actual classroom integration remains low due to infrastructural challenges, lack of training, and insufficient access to AI platforms. Interestingly, utilization was slightly better for test generation and simulation-based teaching, where moderate-to-high usage exceeded 40% in total. These pockets of engagement suggest that teachers are more comfortable using AI for routine or non-instructional tasks, a trend also observed by Yahya et al. (2024) in Lagos State, where teachers primarily used AI to reduce administrative burden.

Contrary to the current findings, Onuh and Charles (2024) found that AI adoption in Enugu significantly enhanced teachers' productivity and instructional planning, suggesting that location-specific variables such as infrastructure, training, and policy support are critical to AI adoption. Teachers in Ekiti State may be willing, but they lack the enabling environment. Moreover, the regression analysis in the study reveals that both awareness and perception were statistically significant predictors of utilization. This validates earlier assertions by Robert et al. (2024) and Selwyn (2020), who emphasized that increasing awareness and reshaping teacher attitudes through sustained training and policy engagement are key to improving AI adoption in schools.

Conclusion

Based on the findings of the study, it was concluded that:

1. Mathematics Teachers' level of awareness of the potentials of AI-enhanced pedagogy is low in Ekiti State public Secondary Schools.
2. Ekiti State public Secondary School Mathematics teachers, have negative perceptions about the potentials of AI-enhanced pedagogy.

3. Teachers' negative perception about the potentials of AI-enhanced pedagogy is as a result of the teachers' low level of awareness about the pedagogy.
4. Teachers' level of utilization of AI-enhanced pedagogy is low in Ekiti State public Secondary Schools.
5. Teachers' low level of utilization of AI-enhanced pedagogy is largely influenced by their negative perceptions as well as their limited exposure to workshop trainings on AI-enhanced pedagogy.

Recommendation

Based on the conclusion, it was recommended that Ekiti State ministry of Education should:

1. The Ministry of Education and school authorities should organize regular training and workshops to improve teachers' awareness and technical competence in using AI tools for mathematics instruction.
2. Colleges and Universities should integrate AI-enhanced pedagogy into teacher education programmes to equip future teachers with relevant digital skills.
3. Government and school administrators should invest in essential digital infrastructure and provide access to AI platforms and AI-powered assessment tools in public schools.
4. Periodic evaluation should be conducted to monitor the impact of AI tools on teaching and learning outcomes, ensuring continuous improvement and relevance.

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