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RESEARCH ARTICLE

Developing trust and confidence in the delivery of Ai-Oriented teaching strategies among Non-ICT expert teachers

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ABSTRACT

Information Communication and Technology (ICT) introduces intelligent, adaptive, and data-driven tools that enhance both teaching and learning processes, helping transform the education system today. Artificial Intelligence (AI) streamlines administrative and instructional tasks for educators, such as grading, content generation, and curriculum planning, freeing up time for more meaningful student-teacher interaction. However, concerns persist regarding the ethical implications, data privacy risks, and over-reliance on AI systems in the classroom. This paper explored different factors that could influence teachers' confidence and trust in the use of AI in classrooms. Eighteen instructors from Iloilo, Zamboanga City, and Surigao City were purposively sampled and interviewed, and the data were analyzed thematically following Braun and Clarke's[1] approach. The study revealed that non-ICT expert teachers generally perceived AI integration as disruptive to their instructional flow, with 72% reporting misalignment with established teaching strategies, 61% noting increased student passivity, and over half citing frequent technical complications that hindered classroom productivity. Teachers expressed that AI tools often lacked contextual sensitivity and failed to support spontaneous teacher-student interaction, with some viewing these tools as undermining their pedagogical autonomy. The development of trust and confidence in AI technologies among these teachers was found to be heavily influenced by three major factors: structured training, improved curriculum guidelines, and institutional support. Interpreted through the Technology Acceptance Model (TAM), these findings highlight how perceived ease of use,

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perceived usefulness, and attitudes toward AI shaped teachers' behavioral intention. Consequently, effective AI adoption among non-ICT expert teachers required more than technical functionality. It demanded systemic, pedagogical, and psychological alignment to ensure sustainable, confident, and meaningful use of AI in education. Future research should design and test AI-focused teacher training programs, investigate curriculum-level integration policies (e.g., through the Philippine Department of Education), and explore AI tool designs that preserve teacher autonomy while supporting student engagement.

Keywords: AI-assisted learning; artificial intelligence; confidence; technology acceptance model

1. Introduction

In recent years, AI technology has been increasingly integrated into the educational sector, encompassing a range of applications including chatbots [2], intelligent tutoring systems [3], and online learning platforms [4]. These innovations have not only enhanced the delivery of instructional content but have also shown considerable promise in improving student assessment and the personalized allocation of educational resources, which significantly advancing the efficiency and adaptability of education systems [5,6].

AI technologies have introduced numerous opportunities for reforming traditional pedagogical approaches, contributing to improved teaching effectiveness and enriching student learning experiences [7]. At present, AI is being implemented across some broad different educational systems, such as automated grading systems, teacher feedback mechanisms, online instruction, personalized learning environments, virtual reality, precision reading programs, smart campuses, and remote learning platforms [8,9].

This paper explored the behavioral intentions of teachers with minimal digital skills through the lens of confidence and trust towards AI use in classrooms. The effective integration of AI technologies within educational environments depends not solely on the advancement and reliability of the technology itself, but more critically on the active participation and commitment of educators. Their behavioral intention to embrace and implement these tools serves as a fundamental catalyst in facilitating meaningful transformation within the educational landscape [10]. Behavioral intention refers to an individual's belief or expectation regarding their likelihood of engaging in a specific behavior in the future [11]. In the context of tertiary education, teachers' intentions to adopt AI are key determinants in the effective implementation of such tools, directly influencing instructional quality and student achievement outcomes [11-13].

However, the complexity of AI imposes substantial demands on educators' technical competencies, particularly in relation to AI tool usage and coding proficiency [5]. These challenges may result in technological barriers that adversely affect teachers' willingness to engage with AI technologies [11]. In addition, the implementation of AI in educational practice is hindered by a combination of individual-level challenges (e.g., limited technical expertise and low confidence), ethical considerations (e.g., concerns around data security and ethical governance), and systemic constraints (e.g., insufficient technical training and inadequate infrastructure support) [14,15]. These factors not only hinder teachers' confidence and trust to adopt AI but also complicate the overall process of technological integration in education.

While teachers are central stakeholders in the integration of AI in education, current empirical literature remains limited in exploring the nature of their trust and the individual or contextual determinants that shape it [16,17]. Previous studies have identified several influential factors, including teachers' knowledge of AI, perceived self-efficacy, levels of anxiety, perceptions of usefulness and ease of use, and trust in the technology itself [18-20]. Glikson and Woolley [21], in their review of trust in AI, identify features like tangibility, transparency, reliability, adaptiveness, and anthropomorphism as potential enablers of trust from the technological standpoint. Importantly, trust is recognized as a critical antecedent to adoption of

technology. For example, if educators perceive significant risks associated with experimentation, they are less inclined to engage with emerging technologies [22,23]. Consequently, perceived concerns, like usability challenges to fears of losing control, serve as barriers to fostering trust in AI applications within educational settings.

Despite growing interest in AI integration, few evidence-based investigations have explored teachers' trust in such technologies [24,25]. This study addressed this gap examining the underlying factors that influence teachers' trust in AI technology, particularly within instructional settings. This investigation was centerd on teacher-specific variables which helped in providing contexts for psychological and contextual dimensions that shape trust towards AI-oriented pedagogy.

2.Literature review

The Technology Acceptance Model (TAM) has been extensively adopted to examine users' perceptions and behavioral responses toward various forms of technology. In the context of education, teacher technology acceptance has been conceptualized as a complex phenomenon influenced by both external (exogenous) and internal (endogenous) factors [26]. TAM was specifically designed to forecast technology adoption behaviors [27]. The central constructs of TAM, particularly the perceived ease of use, perceived usefulness, and attitude toward use, remain fundamental in explaining users' behavioral intentions [27,28]. These constructs are also directly tied to the development of teacher confidence and trust in technology, since confidence often arises from ease of use and trust is influenced by perceived usefulness and reliability.

Existing scholarship on technology acceptance in educational settings has largely been anchored in the TAM [29,30]. For example, Wang et al. [20] examined the behavioral intention of in-service faculty members to integrate AI tools. Their research utilized the TAM framework to explore how factors such as anxiety, self-efficacy, attitudes toward AI, perceived ease of use, and perceived usefulness predicted teachers' intention to adopt AI technologies. Similarly, Choi et al. [31] investigated in-service teachers' perceived trust in AI-based educational tools, also employing the TAM model. Their findings emphasized that the perceived ease of use emerged as the most influential determinant in shaping teachers' acceptance of AI. Together, these studies demonstrate that trust and confidence are not peripheral issues, but central dimensions embedded within TAM constructs that predict technology adoption.

Attitudes, defined as an individual's positive or negative feelings toward a specific behavior [32,33], significantly shape behavioral intention [34]. In AI education research, particularly among students, attitudes toward AI have been identified as one of the most influential predictors of the intention to learn and engage with AI tools [35-37]. For instance, learners with a favorable attitude toward AI are more likely to explore its applications in both academic and real-world settings. Teachers who exhibit high attitudinal positivity towards the use of ICT are significantly more capable of incorporating these tools into their teaching practices [38]. Although most research has focused on student populations, limited studies have extended this examination to teachers [39]. This underscores a research gap: while attitudes are well studied, less attention has been given to how teachers' confidence and trust shape their attitudes and, in turn, their willingness to adopt AI.

Furthermore, relevance in the educational context refers to the degree to which a technology aligns with users' real-world needs, goals, and environments [40,41]. For AI to be pedagogically relevant, it must align coherently with teachers' professional experiences, instructional methodologies, and the anticipated long-term educational advantages it offers to students [34]. When teachers find AI meaningful and applicable to their teaching goals, they are more inclined to advocate its integration into curricula. Ayanwale et al. [39]

found that perceptions of AI relevance can directly influence behavioral intentions. Relevance is also a key dimension of teacher trust: if teachers perceive AI as disconnected from their instructional goals, their confidence in using it diminishes. Nonetheless, further investigation is required to examine how perceived relevance influences both teachers' attitudes and their perceived readiness, especially among those who remain skeptical about the integration of artificial intelligence within conventional pedagogical frameworks.

Lastly, AI readiness involves teachers' preparedness, both in knowledge and disposition, to effectively adopt AI technologies in their instructional practices. It covers not only technical proficiency but also psychological preparedness and openness to innovation [42]. According to Blut and Wang [43], successful integration of complex systems like AI necessitates a high degree of readiness. In the classroom, teachers who feel equipped to use AI are more likely to experiment with it and integrate it into their pedagogy. This readiness may be cultivated through professional development programs, institutional support, and exposure to AI applications that align with educational standards and teaching goals [44]. Since readiness is closely linked to confidence, studies that focus only on technical preparedness risk overlooking the affective dimension — namely, how trust in AI systems shapes whether teachers actually apply their knowledge in practice.

Teachers' attitudes toward the integration of ICT in instructional contexts are fundamental determinants for the successful adoption and implementation of emerging educational technologies [45]. Attitudinal orientation serves as a critical indicator of whether educators are inclined to embrace technological innovations within their classroom settings [46]. However, current scholarship still underrepresents the constructs of trust and confidence, particularly among non-ICT expert teachers. Addressing this gap, the present study specifically examines how these constructs interact with TAM variables to influence teachers' willingness to adopt AI in classroom practice.

3.Research objectives

This paper explored the perceptions and experiences of non-ICT expert teachers in AI-oriented classroom instruction. This paper sought to understand how to improve teachers' confidence and trust towards AI integration in education. Below are the specific objectives of this study.

1. To explore the perceptions and experiences of non-ICT expert teachers regarding the integration of AI-oriented teaching strategies in their instructional practices.
2. To examine the factors that influence the development of trust and confidence among non-ICT expert teachers in adopting AI-driven educational tools and methods.

4. Methods

4.1. Research design

This paper explored the experiences of non-ICT expert teachers in using AI in classrooms. Exploratory research oftentimes examines emerging phenomena and to cultivate in-depth understanding of areas that have received limited scholarly attention [47,48]. This approach typically involves intentional and methodical processes aimed at discerning significant patterns within data, which allows for systematic analysis of sociocultural and psychological dimensions [49,50]. Although some academics question its methodological rigor and reliability, contemporary discourse highlights its critical role in advancing comprehensive understanding of a phenomenon and promoting the structured collection of qualitative evidence [51]. A key strength of exploratory research lies in its inherent flexibility that enabled this study to adapt the methods in response to emerging narratives [52]. This adaptability is especially crucial when examining subjects that

remain insufficiently explored within the existing body of literature [53]. This paper addressed a crucial question in AI-oriented learning: how to enhance its effectiveness while simultaneously ensuring ethical integrity and promoting student-centered pedagogy.

4.2. Participants and sampling

Exploratory research commonly employs a deliberately chosen, limited sample of participants to enable an in-depth examination of study variables and their connections [54]. This approach emphasizes the collection of in-depth, contextually grounded insights instead of making broad statistical generalization [55]. The sample size remains flexible, primarily determined by the extent to which participants can provide substantive and relevant data [56]. Purposive sampling is frequently used in qualitative research to select participants through a systematic and intentional identification process [57,58]. In the current study, online purposive sampling was employed [59], wherein Google Forms was used to distribute open-ended questions and collect preliminary responses that informed the selection of interview participants. Recruitment links were disseminated through institutional email lists and teacher social media groups to reach potential respondents. The respondents were primarily teachers from Iloilo, Zamboanga City, and Surigao City, reflecting perspectives from both the Western Visayas, Western Mindanao, and Caraga regions. Five sample characteristics were considered: (1) a teacher, (2) familiar with different applications of AI, (3) exposed to AI use in classrooms, (4) has perceived minimal ICT skills, and (5) willingness to participate in one-on-one interviews. There were 54 who responded to the online sampling, but only 18 were chosen to be interviewed (33.3% selection rate). Data collection reached saturation by the 16th interview, with the final two confirming redundancy, which supports the adequacy of this sample size for qualitative exploration [56].

4.3. Instrumentation

A semi-structured interview protocol was carefully constructed to ensure a rigorous and coherent data collection process. Following Kallio et al. [60], the process involved reviewing relevant scholarly literature, formulating preliminary questions, and refining the tool through expert consultation and pilot testing. The protocol incorporated probing techniques designed to draw out in-depth perspectives, personal values, and experiential narratives from participants [61,62]. It underwent evaluation by topic experts to ensure alignment with the objectives and to enhance the credibility and dependability of the data [63]. In addition, pilot testing helped in evaluating the clarity, relevance, and capacity of the questions to evoke rich, substantive responses [64]. Insights gathered from both expert reviewers and pilot participants were used in revising and finalizing the interview guide (see **Table 1**).

Table 1. Final guide questions used during one-on-one interviews

Objectives	Interview Questions
To explore the perceptions and experiences of non-ICT expert teachers regarding the integration of AI-oriented teaching strategies in their instructional practices.	1. Can you describe your experience in using AI tools or strategies in your teaching? How did you feel about it? 2. What are your initial thoughts or perceptions about incorporating AI in the classroom as a non-ICT expert? 3. Have you faced any challenges or successes when trying to integrate AI-oriented strategies into your lessons? Can you share some examples?
To examine the factors that influence the development of trust and confidence among non-ICT expert teachers in adopting AI-driven educational tools and methods.	1. What factors help you feel more confident when using AI tools in your teaching, despite not having an ICT background? 2. How do training, support, or peer collaboration affect your willingness to trust and adopt AI-driven teaching methods? 3. What would make you more comfortable and trusting of AI tools as part of your instructional practice?

4.4. Data collection

Semi-structured interviews were conducted to have a flexible yet organized approach to exploring individual behaviors, perspectives, and personal narratives [65]. Because this study is exploratory in nature, guided interviews ensured a balance between structured questions and open conversation, allowing participants to share their thoughts freely and reflectively [66]. Participants were identified through online purposive sampling, guided by predefined eligibility criteria to ensure relevance to the research focus. After selection, participants received formal invitations, and individual interviews were scheduled accordingly. Ethical considerations were prioritized throughout the data collection process, including obtaining informed consent, maintaining participant confidentiality, and adhering to established research protocols [67-69]. Written informed consent was obtained electronically before interviews were conducted. Confidentiality was assured by anonymizing transcripts, removing identifying details. At the time of data collection, formal Institutional Review Board (IRB) approval was not required by the participating institutions for non-experimental, interview-based studies. Nevertheless, the researchers adhered to institutional ethical protocols to ensure voluntary participation, informed consent, and the protection of participants' data. Interviews were conducted in a respectful and inclusive environment, accommodating participants' preferred language and ensuring psychological comfort. Probing techniques were applied to elicit deeper reflections and to reveal underlying meanings embedded in participant responses [70]. With prior consent from participants, interviews were recorded using secure mobile devices, and preliminary themes were systematically organized using Microsoft Excel to support subsequent analysis and interpretation.

4.5. Data analysis

Reflexive thematic analysis was applied to identify key themes and recurring patterns that reflected participants' lived experiences. This method provided a systematic yet flexible approach to organizing, coding, and interpreting textual data, enabling researchers to construct meaning directly from participants' accounts without relying on fixed theoretical assumptions [71,72]. Its adaptability made it especially suitable for exploratory studies, as it allowed themes to emerge from the data itself rather than being shaped by pre-existing frameworks or notions [73]. The six-phase model of Braun and Clarke [1], which can be seen in **Figure 1,** guided the analysis: (1) immersion in the transcripts, (2) initial coding, (3) generation of candidate themes, (4) review of themes against the dataset, (5) definition and naming of themes, and (6) writing the final thematic narrative. Initial coding was carried out by two authors, after which all six authors reviewed and refined the categories and themes through collaborative discussion. This approach ensured that different perspectives contributed to theme development while minimizing interpretive bias. To supplement the qualitative findings, basic descriptive statistics (frequencies and percentages) were calculated manually. Percentages were used not for inferential purposes but to provide additional clarity on the distribution of views across the sample. Throughout the analytic process, reflexivity was maintained to ensure awareness of researcher subjectivity and its role in shaping interpretations. Rather than treating researcher influence as bias, reflexivity was viewed as a resource for deeper insight into participants' perspectives [74]. This combination of thematic coding and descriptive quantification supported the emergence of authentic, contextually grounded interpretations while also highlighting the relative weight of each theme in the dataset.

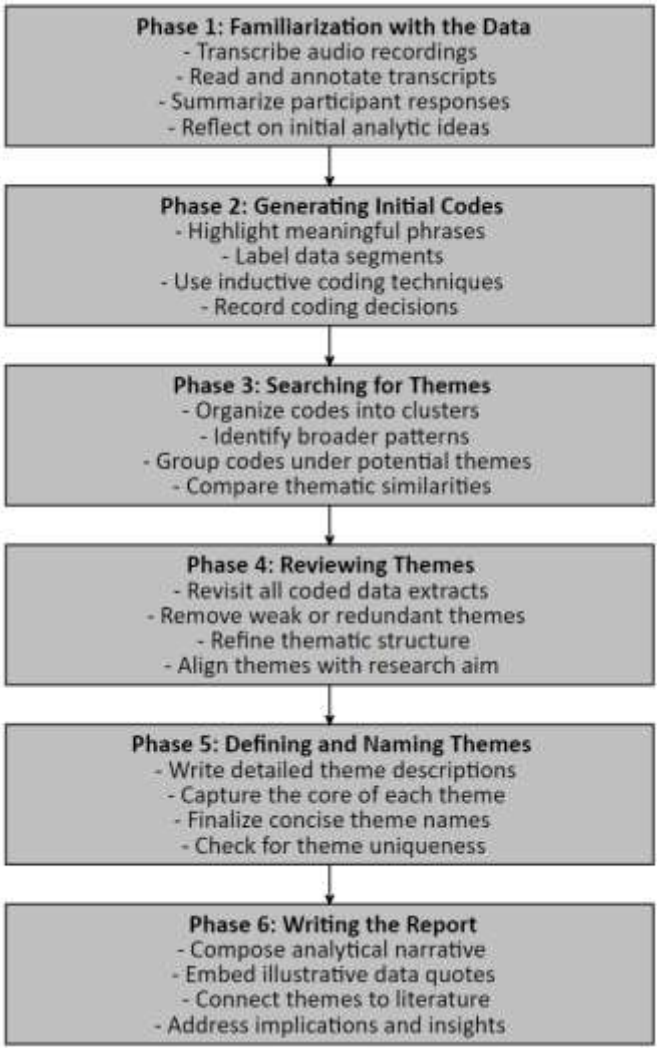

Figure 1. Workflow of data analysis process

5. Results

Objective 1. To explore the perceptions and experiences of non-ICT expert teachers regarding the integration of AI-oriented teaching strategies in their instructional practices.

Theme 1: Disruptive

Fourteen teachers (77.8%) viewed AI not as a reinforcing aid but as a potentially disruptive and intrusive tool that complicated their instructional strategies. This sentiment was especially evident among non-ICT expert teachers, many of whom remained hesitant or overwhelmed due to their limited technical proficiency and lack of confidence in managing new technologies. The integration of AI for some educators amplified concerns over diminished autonomy, where reliance on automated systems was perceived as eroding professional agency.

> "Sometimes it feels like the AI is teaching instead of me, and I lose control over how the lesson should flow."

> "Most AI tools don't really match how I teach…they feel robotic and force me to change what already works for my students."

Ten teachers (55.6%) reported that AI integration felt artificial and misaligned with their existing instructional frameworks. Instead of enhancing their current methods, AI tools were seen as imposing rigid structures that distracted from pedagogical priorities. For non-ICT expert teachers, using AI often required a steep learning curve that disrupted lesson flow and introduced technological complications.

> "The content it generates looks polished but doesn't connect with the realities of my students or the context of our lessons."

Seven teachers (38.9%) found that AI-generated content lacked nuance and classroom specificity, making it difficult to adapt to students' real-world experiences. While tech-savvy students might engage with digital tools, some educators observed a distracting novelty effect that undermined deeper critical thinking. Rather than facilitating relevance, AI was sometimes seen as a deterrent to authentic teacher-student interaction, reducing opportunities for spontaneous discussion and inquiry.

> "My students get excited at first, but then they get distracted playing with the AI instead of focusing on the topic."

Some students received inaccurate or irrelevant suggestions, and teachers found themselves having to intervene frequently to correct or redirect the technology. Rather than empowering teachers with minimal digital skills, these experiences amplified their dependence on tools they did not fully understand, reducing instructional confidence.

> "There were times I had to stop the lesson just to explain or fix what the AI tool did wrong. It disrupted the momentum."

Theme 2: Erosion of Learning Productivity

Rather than streamlining instructional delivery, the presence of AI sometimes redirected attention away from the lesson objectives and toward troubleshooting basic functionalities. For the non-ICT expert teachers (66.7%), this shift became a source of frustration, as their limited technical expertise made it difficult to provide immediate solutions.

> "Instead of making things easier, AI sometimes slowed down the class because students kept asking how to use the tool rather than focusing on the actual lesson."

> "The lesson flow was interrupted more often than not because either the AI glitched or students got confused and needed constant clarification."

> "I spent more time managing the technology than actually teaching, and it took away from the depth we used to have in our discussions."

Nine teachers (50%) observed that AI tools, while designed to assist, sometimes encouraged cognitive offloading, where students deferred to the system instead of engaging in independent thinking. This passivity undermined active learning principles and discouraged intellectual struggle, which is essential for critical thinking and in-depth understanding.

> "I noticed that when we used AI platforms, students became more passive. They are waiting for the system to do the thinking for them."

While AI offered convenience and surface-level correctness, it often produced outputs that lacked critical thought and personal voice. For teachers, this hindered metacognitive development, as students bypassed the reflection and revision stages essential to mastery.

> "When students relied too much on AI, the quality of their outputs became more mechanical and less reflective of their real understanding."

Objective 2. To examine the factors that influence the development of trust and confidence among non-ICT expert teachers in adopting AI-driven educational tools and methods.

Theme 1: Teacher Training

The intimidation factor was not rooted in the complexity of AI itself, but in the absence of sufficient pedagogical preparation. Sixteen teachers (88.9%) emphasized that when they were introduced to AI through structured, comprehensible training modules, their anxiety was reduced and could be replaced by curiosity and practical confidence. They also believed that AI tools, when framed correctly in training, could be presented as extensions of existing pedagogical methods rather than alien intrusions.

> "I believe proper training would make AI tools feel less intimidating and more manageable."

> "If training programs focused on practical classroom use, I think more teachers would feel confident using AI."

Thirteen teachers (72.2%) highlighted that the dynamic and evolving nature of AI required regular, updated training opportunities to maintain teacher relevance and understanding. For non-ICT expert teachers, continuous training created a pathway that could gradually close the gap between digital unfamiliarity and instructional fluency. Teachers were more likely to trust AI when its application clearly served their educational intentions, such as differentiation, formative assessment, or learner engagement.

> "I perceive continuous training as essential to understanding how AI can be aligned with our teaching goals."

> "In my opinion, trust in AI begins with being taught how to use it in a pedagogically sound way."

In addition, eleven teachers (61.1%) stated that structured training was seen as a form of cognitive and emotional scaffolding, providing order, sequence, and a safe learning space. The lack of structure could result in fragmented understanding, inconsistent use, and ultimately resistance to adoption.

> "I think without structured training, most non-tech-savvy teachers will always feel hesitant toward AI integration."

Theme 2: Improved Curriculum Guidelines

For most teachers (72.2%), when AI was explicitly incorporated into educational standards, it provided a legitimizing framework for its use. This could delineate the appropriate pedagogical contexts in which AI might enhance instruction, ensuring that its application was intentional rather than arbitrary. For non-ICT expert teachers, this clarity was particularly valuable, as it reduced the uncertainty that often accompanied unfamiliar technological innovations.

> "I think having AI explicitly included in the curriculum would help clarify when and why we should use it."

> "In my opinion, if the curriculum supports AI integration clearly, it will legitimize its use and reduce resistance."

Twelve teachers (66.7%) emphasized that a curriculum that deliberately aligned AI with learning outcomes would communicate its educational relevance. Purpose-driven integration also enabled coherent

instructional planning, making AI a tool for achieving defined objectives rather than experimenting without direction. When the role of AI in education is mapped directly onto competencies or standards, it builds a sense of intentionality which then builds trust in AI-assisted learning.

> "A well-aligned curriculum would, in my view, make teachers feel that AI use is not just optional but purposeful."

> "To me, an AI-ready curriculum would increase teachers' trust in the relevance of these tools for learning."

In addition, eleven teachers (61.1%) stated that specific strategies, such as sample lesson plans, tool recommendations, or usage protocols, were perceived as essential for translating policy into classroom application. For non-ICT expert teachers, such specificity was especially critical, given their limited digital expertise and greater reliance on institutional guidance. Generally, uncertainty was a key barrier to confidence, one that could be mitigated through clear instructional models. Teachers needed to know not only that they should use AI, but how to use it in a manner that enhanced learning outcomes.

> "I believe curriculum guidelines should offer specific strategies for integrating AI, or many teachers will remain unsure."

Theme 3: Institutionalized Support

Confidence in using AI tools was not solely dependent on individual readiness but on access to responsive institutional support systems. Fifteen teachers (83.3%) reported that knowing that immediate help was available allowed educators, especially non-ICT experts, to experiment without fear of irreversible error or classroom disruption.

> "I think teachers would feel more secure using AI if they knew technical support was always available."

Thirteen teachers (72.2%) emphasized that when institutional actors, such as administrators or department heads, openly supported AI use, it signaled that the innovation had long-term strategic value. Such encouragement transformed AI from a classroom-level experiment into a recognized component of school development. For non-ICT expert teachers, who might otherwise hesitate, this formal backing served to validate their efforts and reduce feelings of isolation or improvisation.

> "Institutional encouragement, in my view, builds trust that AI is not just a passing trend but a serious investment."

> "I perceive school leadership support as key to making teachers feel safe experimenting with AI tools."

Finally, twelve teachers (66.7%) stressed thatPolicy guidance clarified expectations and legitimized AI use, while infrastructure, such as stable internet, access to devices, and maintenance systems, ensured feasibility. For teachers, knowing that AI adoption was structured and equitable minimized the perception of isolation or inadequacy. In AI adaptation, confidence did not emerge solely from personal capability, but from a coherent institutional ecosystem.

> "I believe confidence grows when AI is introduced as a shared initiative supported by policy and infrastructure."

> "To me, trust in AI adoption depends heavily on whether the school provides consistent resources and guidance."

6. Discussion

This study identified multiple factors that influence teachers' willingness to adopt AI-integrated learning in classrooms. Non-ICT expert teachers generally perceived AI integration as disruptive to their instructional flow, often citing misalignment with their teaching styles, reduced student engagement, and technological complications that hindered productivity. However, their trust and confidence in adopting AI were significantly shaped by structured teacher training, improved curriculum guidelines, and consistent institutional support. These factors provided clarity, relevance, and a sense of security in using AI tools for instruction.

The Technology Acceptance Model (TAM) provides a useful lens to interpret these findings [27,28]. Teachers' difficulties with technical glitches, student passivity, and misalignment with pedagogy reflected a low perceived ease of use, while skepticism about AI's educational relevance reflected a lack of perceived usefulness. In contrast, when teachers envisioned AI being introduced through structured training and curricular alignment, both ease of use and usefulness increased, producing more positive attitudes toward use and stronger behavioral intentions. This reinforces earlier research where TAM has been applied to teacher adoption of ICT and AI [20,26,31].

Familiarity emerged as a key enabler. Teachers with limited digital proficiency felt less confident in using AI, echoing findings by Samani et al. [75] and Staddon [76] that prior exposure strengthens both attitudes and confidence. Similarly, Wang et al. [20] showed that anxiety and lack of self-efficacy reduce teachers' behavioral intentions to adopt AI. This study aligns with those findings: non-ICT expert teachers expressed hesitation because AI often slowed down class activities, introduced errors, or required frequent troubleshooting.

Another critical determinant was perceived relevance, defined as the alignment between technology and teachers' professional needs [34,41]. Teachers in this study feared that AI could undermine autonomy, expose students to irrelevant content, or standardize teaching practices. These concerns mirror Cukurova et al. [16] and Velander et al. [17], who noted that trust in AI depends not only on transparency and reliability but also on whether tools respect professional expertise. By contrast, Ayanwale et al. [39] found that when teachers perceived AI as pedagogically relevant, their willingness to adopt it increased. The present study therefore contributes by showing that perceived relevance and teacher autonomy must be addressed together when designing AI for classrooms.

Perceived usefulness was another determinant, consistent with Antonietti et al. [77] and Bin et al. [78], who reported that usefulness strongly predicts technology adoption. Teachers here expressed that AI could be helpful for differentiation, formative assessment, and engagement, but only when embedded meaningfully in pedagogy. Otherwise, their negative experiences overshadowed potential benefits, confirming Kong and Lin [79] and Szymkowiak and Jeganathan [80], who found attitudes directly shape behavioral intentions.

Professional development and readiness emerged as critical enabling factors. Sanusi, Ayanwale, and Chiu [34] stressed that teacher training should cultivate positive attitudes toward AI. This study builds on that by showing that readiness is not only about access to devices but also about sustained training, pedagogical integration, and institutional scaffolding [81]. Similarly, Ayanwale et al. [39] highlighted that perceptions of AI relevance directly influence intention; our results extend this by showing that relevance must be reinforced through curriculum design and supportive leadership.

Institutional support was repeatedly emphasized by participants. Teachers reported greater trust when they had access to technical assistance, leadership encouragement, and policy guidance. This aligns with

Scherer & Teo [26], who stressed the importance of facilitating conditions for technology adoption. In the Philippine context, teachers particularly noted the lack of Department of Education (DepEd) curriculum guidelines on AI integration, which amplified uncertainty and resistance. This absence contrasts with findings in other regions, such as Vietnam, where Huong et al. [82] observed that national-level policies and training initiatives enhanced teachers' digital competencies.

Finally, this study highlights the importance of digital self-efficacy. Building confidence in one's ability to teach with AI was found to be as essential as technical knowledge itself. Training must therefore address cognitive, emotional, and social aspects of digital readiness — an approach also echoed by Clipa et al. [38], who found positive teacher attitudes toward ICT predicted more successful integration. In this way, enhancing digital self-efficacy has a cascading effect on teacher agency, instructional quality, and long-term AI adoption.

In sum, the findings suggest that TAM constructs (ease of use, usefulness, attitudes) explain much of teachers' hesitation and trust, but adoption of AI also depends on broader factors — professional autonomy, institutional scaffolding, and contextual policy alignment. This expands the TAM framework by showing that, in the case of AI, adoption decisions are not only about usability but also about trust, relevance, and teacher identity as pedagogical leaders.

6. Conclusion

This study explored the experiences of non-ICT teachers in adapting to AI-assisted learning. While non-ICT expert teachers acknowledged the potential of AI in education, many perceived its integration as a disruption to their instructional practices. Teachers noted that AI tools often conflicted with their teaching styles, introducing more challenges than benefits — such as technical issues, student passivity, and confusion — that disrupted instructional flow. Many also felt that AI undermined their autonomy and lacked contextual relevance, leading to skepticism and hesitation, especially among those with limited digital confidence. Beyond technical difficulties, psychological, pedagogical, and curricular misalignments were key barriers to AI adoption.

Nonetheless, the study also identified clear pathways to building trust and confidence in AI integration. Structured teacher training was essential not only for building digital skills but also for supporting emotional and cognitive adaptation to AI-based instruction. Continuous development focused on practical application and pedagogical alignment, along with clear curriculum guidelines and institutional support, could help in legitimizing AI use and reduce uncertainty.

This study contributes to the literature by demonstrating that teachers' trust in AI is shaped not only by usability and technical performance but also by psychological readiness, institutional scaffolding, and curricular legitimacy. These findings suggest that successful AI adoption requires a holistic approach that integrates training, curriculum design, and policy support.

Future research should move in three concrete directions. First, there is a need to design and evaluate AI-focused professional development programs tailored for non-ICT expert teachers, emphasizing hands-on practice and classroom relevance. Second, policy-oriented studies could investigate how the Department of Education in the Philippines and similar agencies in other countries might embed AI into formal curriculum guidelines, ensuring both legitimacy and consistency of use. Third, further work should explore how AI tool design can preserve teacher autonomy while still enhancing student engagement, perhaps through co-design approaches involving teachers as key stakeholders. Additional comparative studies across subject areas (e.g., mathematics vs. language teaching) and education levels could also clarify whether trust and confidence

issues differ by discipline or context. Finally, longitudinal research could track how institutional support, once formalized, affects the evolution of teacher trust in AI over time.

Conflict of interest

The authors declare no conflict of interest.

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