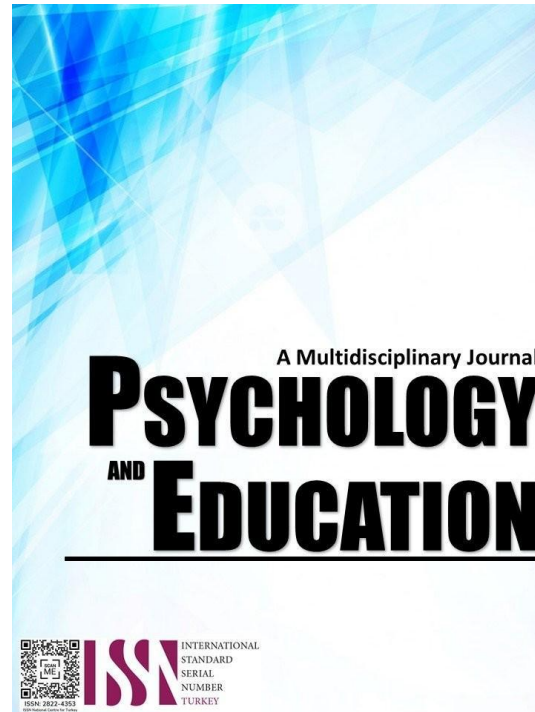


CAN AI REPLACE TEACHERS? THE VALUE OF ARTIFICIAL INTELLIGENCE IN PHILIPPINE EDUCATION



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Can AI Replace Teachers? The Value of Artificial Intelligence in Philippine Education

Apolinar B. Fudalan*

For affiliations and correspondence, see the last page.

Abstract

As Artificial Intelligence (AI) technologies become increasingly embedded in global education systems, their impact on teaching practices, teacher roles, and student learning requires critical exploration. In the Philippine context, where values formation and relational pedagogy remain foundational, the question of whether AI can replace teachers has become both timely and necessary. This study employed a qualitative phenomenological research design to explore the lived experiences of 25 Filipino educators across public and private institutions in Luzon, Visayas, and Mindanao. Data were collected through semi-structured interviews and focus group discussions and analyzed using Braun and Clarke's thematic analysis framework, supported by NVivo software. The study focused on key areas including AI's pedagogical value, its emotional limitations, ethical concerns, and institutional readiness. Four major themes emerged: (1) AI is viewed as an instructional support tool, not a replacement; (2) the human touch—empathy, mentorship, and moral guidance—remains irreplaceable; (3) significant gaps exist in digital readiness and teacher training; and (4) ethical apprehensions persist around data privacy, academic integrity, and teacher deskilling. Educators recognized AI's usefulness in streamlining tasks and enhancing personalization, but emphasized that it must be implemented in ways that uphold teacher agency and professional identity. This study reinforces that AI, while beneficial for instructional support, cannot replicate the affective and ethical dimensions of human teaching. The Philippine education system must adopt a teacher-centric AI integration model that addresses infrastructure gaps, strengthens professional development, and embeds ethical safeguards. The findings contribute to emerging discourses on human-centered AI in education and offer timely policy and training insights for sustainable, inclusive, and culturally grounded AI adoption in the Philippines.

Keywords: *Artificial Intelligence, Philippine education, teacher perceptions, educational technology, ethical teaching*

Introduction

Artificial Intelligence (AI) has rapidly become a transformative force in global education, reshaping how teaching and learning are delivered through technologies such as intelligent tutoring systems, chatbots, adaptive platforms, and gamified applications. These innovations promise to enhance educational outcomes by automating administrative tasks, personalizing instruction, and enabling data-driven interventions. In the Philippines, AI integration is increasingly seen as essential to achieving Education 5.0 goals—where digital fluency, human-centric learning, and technological equity converge (Balaquiao, 2024; Carvajal et al., 2025). However, as AI becomes more deeply embedded in classrooms, it raises critical pedagogical questions about its boundaries and the evolving roles of teachers in technology-augmented environments.

Emerging studies in the Philippine context acknowledge AI's pedagogical potential while simultaneously cautioning against its uncritical adoption. Research has shown that while AI tools may improve efficiency in language instruction and assessment, they struggle to replicate higher-order thinking, cultural sensitivity, and emotional depth—traits vital to meaningful learning (Mananay, 2024; Capinding & Dumayas, 2024). Moreover, studies have expressed concerns about the erosion of interpersonal relationships in learning environments increasingly mediated by machine-generated feedback (Louis & ElAzab, 2023; Chounta et al., 2022). These insights underscore a growing tension between technological advancement and the irreplaceable humanistic foundations of Filipino education, where values formation, empathy, and moral guidance are deeply embedded in the teaching profession.

Equally important is the question of teacher readiness and institutional capacity for responsible AI integration. According to Gamad et al. (2025), Filipino teachers remain unevenly prepared for Education 5.0, often constrained by outdated pedagogical frameworks and limited exposure to digital tools. David and Maroma (2025) further observed that pre-service teachers expressed ambivalence toward generative AI tools like ChatGPT—some appreciating its instructional support, while others struggled with ethical boundaries and the perceived decline of original thinking. These studies suggest that the successful adoption of AI is not merely a technological issue but a pedagogical, ethical, and cultural one, requiring a deliberate rethinking of teacher training, digital infrastructure, and professional development models.

The literature also identifies significant ethical and equity challenges associated with AI in education. These include data privacy concerns, academic integrity risks, and fears of teacher deskilling in contexts where AI replaces rather than augments professional judgment (Khatri & Karki, 2023; Eden et al., 2024). In the Philippine setting, where education is deeply tied to character formation and social justice, these risks take on heightened significance. Ethical implementation, inclusive access, and participatory design must guide the national discourse on AI use in schools to ensure that innovation does not deepen existing inequalities or compromise educational values (Bibi et al., 2024; Topali et al., 2025).

Despite these growing discourses, there remains a crucial gap in the literature concerning how Filipino in-service educators themselves make sense of AI's role in their professional landscape. Most existing research focuses on students, developers, or policy-level analysis, leaving teachers' perspectives underrepresented. To address this gap, the present study explores the lived experiences and perceptions of Filipino educators from diverse institutions across Luzon, Visayas, and Mindanao. It seeks to uncover how they conceptualize AI's pedagogical value, ethical implications, and limitations, offering culturally grounded insights into how AI can be responsibly integrated into Philippine education without compromising the human essence of teaching.

Research Questions

The primary objective of this study is to explore and understand how Filipino educators perceive the integration of Artificial Intelligence (AI) in the teaching and learning process across diverse educational contexts. Specifically, the study aimed to:

1. Explore the lived experiences and professional insights of Filipino educators regarding the integration of AI in teaching and learning.
2. Examine teachers' perceptions of the pedagogical value of AI as an instructional support tool in Philippine educational settings.
3. Identify the perceived limitations of AI in replicating human-centered teaching practices such as emotional intelligence, mentorship, and contextual responsiveness.
4. Analyze the challenges educators face in relation to AI infrastructure, digital readiness, and access to professional development.
5. Investigate the ethical and pedagogical concerns associated with AI use in the classroom, including issues of academic integrity, data privacy, and potential teacher deskilling

Literature Review

The increasing global integration of Artificial Intelligence (AI) in education is transforming traditional pedagogical approaches, necessitating a reconfiguration of instructional design, assessment mechanisms, and administrative functions. In the Philippine context, AI adoption is framed as an adaptive response to the imperatives of Education 5.0, which promotes both technological fluency and human-centered learning. However, this integration generates tension between innovation and the preservation of core teaching values such as empathy, cultural responsiveness, and moral formation (Balaquiao, 2024; Carvajal et al., 2025). The literature reflects a duality wherein AI offers operational efficiency but simultaneously challenges the socio-emotional foundations of Philippine pedagogy. This intersection underscores the need for critical examination of AI's alignment with educational philosophies rooted in holistic human development.

Recent empirical evidence suggests that while AI tools enhance instructional efficiency, their uncritical use can disrupt pedagogical authenticity and widen systemic gaps. Filipino educators recognize the utility of AI in automating grading, delivering instant feedback, and customizing content, yet many report digital fatigue and institutional unpreparedness (Umali, 2024). These findings mirror broader disparities in digital infrastructure and digital literacy across Philippine regions, exacerbating educational inequalities. Furthermore, educators with international exposure view AI adoption as a transformation of teacher identity and instructional values, prompting the need for locally anchored and ethically guided implementation models (Borbon et al., 2025). This body of research highlights that technical innovation must be tempered with pedagogical intentionality and cultural sensitivity.

Teacher readiness remains a decisive factor in determining the success of AI integration in education systems. Although preservice teachers demonstrate growing awareness of AI's instructional applications, lingering apprehensions remain about its effects on creativity, student independence, and critical reasoning (Bautista et al., 2024). Post-pandemic studies further reveal gaps in educators' capacity to align AI competencies with evolving twenty-first-century teaching standards (Ng et al., 2023). These limitations signal the necessity of comprehensive teacher education programs that combine technological proficiency with ethical reflection and adaptive pedagogical strategies. Effective AI integration thus depends not only on tool adoption but also on cultivating teacher agency and reflexivity within contextual realities.

Equally prominent in the literature is the observation that AI lacks the emotional intelligence and ethical discernment required in human-centered teaching. Filipino educators emphasize that moral guidance, mentorship, and affective engagement remain irreplaceable components of instruction—elements that current AI systems cannot replicate (Aure & Cuenca, 2024). Research suggests that reliance on AI without emotional scaffolding reduces learning to transactional interactions, thereby undermining the relational core of education. Cross-national studies validate this concern, as teachers in more technologically advanced nations also express hesitation in delegating ethical and emotional tasks to AI (Chounta et al., 2022). These findings reinforce the irreplaceability of the human educator in preserving the emotional, ethical, and cultural dimensions of learning.

Ethical challenges emerging from AI adoption have also been consistently documented, with concerns ranging from algorithmic bias and surveillance to academic dishonesty and diminished teacher authority. Scholars highlight the urgency of developing robust ethical guidelines that address AI-facilitated plagiarism, data privacy breaches, and the erosion of classroom integrity (Khatri & Karki, 2023; Bai, 2024). In the Philippine context, where values formation is central to the national curriculum, these issues demand institutional

vigilance and proactive governance. Recent scholarship advocates for teacher-led ethical frameworks and professional development programs that promote accountability and responsible AI usage (Rane et al., 2024; Armstrong, 2024). Ensuring ethical alignment between AI functionality and educational values is therefore imperative in mitigating misuse and preserving pedagogical dignity.

Lastly, the long-term success of AI integration in education is contingent upon inclusive, context-sensitive, and participatory design processes. Scholars argue that AI tools should not be externally imposed but co-developed with educators, ensuring relevance to classroom realities, cultural expectations, and student needs (Topali et al., 2025). This approach necessitates collaborative frameworks involving teachers, policymakers, and technologists to foster human-centered AI systems that preserve educational equity. The literature suggests that without such stakeholder engagement, AI risks exacerbating existing divides and disempowering teachers in decision-making processes. Overall, a sustained commitment to contextualization, inclusivity, and ethical co-creation defines the path toward responsible and transformative AI integration in Philippine education.

Methodology

Research Design

This study adopted a qualitative phenomenological research design to explore the lived experiences and perceptions of Filipino educators concerning Artificial Intelligence (AI) integration in education. Phenomenology, as a methodology, is well-suited for uncovering the essence of subjective experiences and revealing the nuanced meanings that individuals ascribe to complex phenomena. Given the study's emphasis on emotional, ethical, and contextual dimensions, this approach enabled the elicitation of deeply personal narratives and critical reflections that quantitative designs could not capture. Through this lens, the research examined how educators interpret AI as either a complementary instructional tool or a disruptive force to their professional identity. The design prioritized the authenticity of participant voices in constructing an empirically grounded understanding of AI's pedagogical implications.

Participants

The study involved 25 purposively selected educators, including teachers, instructional designers, academic administrators, and department heads with direct experience using AI-enabled educational tools. Selection criteria included a minimum of two years of teaching experience and demonstrable engagement with AI-integrated pedagogies such as chatbot systems, automated assessment tools, or adaptive learning platforms. Participants represented a range of disciplines, geographic origins, teaching levels, and demographic backgrounds, contributing to data richness and credibility. The purposive sampling strategy was aimed at ensuring that all participants possessed the contextual insight necessary for meaningfully engaging with the study's objectives. This intentional participant selection enabled a detailed exploration of perspectives on the ethical, pedagogical, and practical implications of AI in education.

Procedure

Data collection was conducted from January to March 2025 using semi-structured individual interviews and focus group discussions (FGDs) administered via Zoom and Google Meet. Interviews lasted 45 to 60 minutes and followed a validated guide that addressed AI's instructional application, ethical considerations, emotional impact, and institutional readiness. Five FGDs, each comprising 4 to 6 participants, provided opportunities for dialogic interaction and peer validation of individual narratives. All sessions were audio-recorded with participant consent, transcribed verbatim, and supplemented by researcher field notes to capture contextual nuances and non-verbal cues. Informed consent was obtained before participation, and protocols were followed to ensure ethical, confidential, and voluntary engagement.

Data Analysis

Data analysis followed Braun and Clarke's six-phase thematic analysis framework, involving familiarization, coding, theme generation, theme refinement, definition, and report writing. NVivo 12 software was utilized to facilitate systematic coding and ensure consistency in theme development and retrieval of text segments.

The analysis employed both inductive and deductive approaches to identify emergent themes grounded in participant data while remaining aligned with the study's theoretical framework. Member checking was conducted with ten participants to confirm interpretive accuracy, and triangulation across interviews and FGDs enhanced analytical depth. Peer debriefing with external qualitative experts strengthened credibility and minimized researcher bias, while data saturation was confirmed when no new themes emerged during the final coding phase.

Ethical Considerations

The study secured ethical clearance from the University of the Visayas Institutional Ethics Review Board before data collection. All participants were fully informed of the research objectives, data protection protocols, and their rights, including voluntary participation and withdrawal without penalty. Anonymity was preserved through pseudonymization, and all personal identifiers were removed from transcripts and research notes. Data were stored in encrypted and password-protected files accessible only to the research team, in full compliance with the Data Privacy Act of 2012 (Republic Act No. 10173). These ethical safeguards ensured transparency, confidentiality, and adherence to national and institutional research standards.

Results and Discussion

Theme 1: AI as an Instructional Support Tool, not a Replacement

Participants unanimously agreed that AI serves as a supplementary tool to enhance teaching efficiency rather than as a substitute for human teachers. Many shared experiences of using AI for grading, content generation, and feedback automation but stressed that such tools could not replace human insight in guiding learners.

“AI helps in generating quiz items and giving immediate feedback, but it doesn’t understand the emotional state of my students,” said a high school teacher from Cebu.

The findings affirm that AI is widely regarded by Filipino educators as an instructional support tool rather than a replacement for human teachers, echoing conclusions that highlight AI’s inability to replicate empathy, moral reasoning, and cultural sensitivity in classroom interactions (Fitria, 2023; Louis & ElAzab, 2023). Participants noted the practical value of AI in automating routine tasks such as grading, content generation, and formative feedback—functions that align with its role in boosting instructional efficiency and motivation when guided by teacher facilitation (Chiu et al., 2024). However, teachers stressed that AI lacks the emotional intelligence and contextual awareness necessary to address student diversity and socio-emotional needs, a gap also noted in analyses of AI’s pedagogical limitations (Nikitina & Ishchenko, 2024). In practice, this suggests that AI should be implemented as a teacher-centric tool designed to enhance lesson planning, personalize instruction, and reduce administrative burden, allowing educators to focus on mentoring and holistic development. Thus, rather than pursuing AI-led instruction, the Philippine education system must prioritize ethical, inclusive, and context-driven AI integration that empowers rather than replaces teachers.

Theme 2: The Irreplaceable Human Touch in Education

Educators emphasized the importance of emotional intelligence, mentorship, and contextual sensitivity—qualities they believe AI lacks. Teachers viewed their role as not only conveyors of knowledge but also mentors, life coaches, and moral guides.

“No AI can console a grieving student or encourage a shy learner to speak up. That requires empathy,” said a university professor from Mindanao.

This highlights that despite the advancements of AI in education, its inability to exhibit emotional intelligence, mentorship, and contextual sensitivity renders it incapable of fully replacing the human educator (Tseng & Warschauer, 2023; Igbokwe, 2023). Filipino teachers emphasized their irreplaceable roles as moral guides and emotional anchors, arguing that no AI system can provide comfort to a grieving student or motivate a disengaged learner with empathy and compassion. This perspective aligns with Bower et al. (2024), who stressed that effective teaching requires interpersonal connection, ethical discernment, and situational awareness—capacities that remain uniquely human. While AI can assist in content delivery and data-driven personalization (Pratama et al., 2023), its practical value lies in complementing rather than replacing human judgment, especially in emotionally complex classroom situations. Therefore, AI implementation in Philippine education must be anchored in human-AI collaboration, preserving the affective and ethical dimensions of teaching that technology cannot replicate.

Theme 3: Challenges in Digital and AI Readiness

Respondents expressed concern about unequal access to technology, especially in rural schools, as well as limited training on AI tools. These digital gaps, they noted, could exacerbate inequality if AI were prematurely relied upon in the system.

“Most of our students don’t even have stable internet, let alone access to AI tools,” shared a teacher from a public school in Bicol.

This reveals that digital and AI readiness remains a significant challenge in the Philippine education system, particularly due to disparities in infrastructure, internet connectivity, and teacher training—issues that, if left unaddressed, risk deepening educational inequalities (Campued et al., 2023; Karan & Angadi, 2025). Participants from rural and public schools highlighted the lack of stable internet access and minimal exposure to AI tools, indicating that the premature implementation of AI could exclude already marginalized learners. This concern is supported by Holmström (2022), who emphasized that digital transformation must be grounded in realistic assessments of institutional readiness and technological capacity. Furthermore, Hiniduma et al (2025) advocate for a holistic approach to AI adoption, incorporating infrastructure, human capital, and data systems—elements still lacking in many Philippine educational institutions. To translate AI’s potential into equitable outcomes, policymakers must prioritize investment in digital infrastructure and professional development, ensuring that readiness precedes integration and that no learner is left behind.

Theme 4: Ethical and Pedagogical Reflections on AI Integration

There were also apprehensions about data privacy, academic integrity, and teacher deskilling. Many called for policies that protect both teachers and students from over-dependence on AI while ensuring ethical implementation.

“If we rely too much on AI, we risk losing the soul of teaching—critical thinking, compassion, and values formation,” warned one participant.

The discussion highlights growing ethical and pedagogical concerns among Filipino educators regarding AI integration, particularly

around data privacy, academic integrity, and the potential deskilling of teachers (Khreisat et al., 2024; Bibi et al., 2024). Participants warned that excessive reliance on AI may undermine the core values of education, such as critical thinking, compassion, and character formation, raising fears that teaching could be reduced to automated processes devoid of human meaning. This aligns with Eden et al (2024), who stressed that while AI offers operational efficiency, it must not override ethical imperatives or diminish teacher agency. Nurhasanah & Nugraha (2023) similarly argue that AI integration must be guided by ethical reflection and pedagogical purpose to ensure that it serves as a tool for empowerment, not replacement. Practically, this calls for the creation of national AI education policies that enforce safeguards, promote responsible use, and embed ethical literacy in teacher training programs, ensuring that AI enhances rather than erodes the human essence of teaching.

The results of this study affirm that Filipino educators perceive Artificial Intelligence (AI) not as a threat to their profession but as a complementary tool that enhances instructional delivery. While participants acknowledged the utility of AI in automating routine tasks such as grading, quiz construction, and real-time feedback, they consistently emphasized its limitations in areas requiring emotional intelligence, moral discernment, and situational awareness. These findings align with previous research suggesting that AI lacks the human depth necessary for mentoring, values formation, and interpersonal engagement—core elements of the Philippine educational philosophy (Chounta et al., 2022; Aure & Cuenca, 2024). Consequently, educators advocate for a model of AI integration that reinforces relational pedagogy rather than replacing it with mechanized efficiency.

Educators also expressed optimism about the capacity of AI tools to support instructional personalization and alleviate administrative burdens. Many reported that such innovations allow them to focus more deliberately on student well-being and differentiated learning strategies. These insights are consistent with prior literature emphasizing the alignment of AI functions with teacher autonomy and classroom realities (Umali, 2024; Chiu et al., 2024). In contexts marked by large class sizes and heavy workloads, Filipino teachers identified AI as a potential resource for improving classroom management and pedagogical efficiency, provided that its deployment remains under the teacher's control and is guided by instructional objectives.

Despite these perceived advantages, significant concerns were raised regarding the lack of digital and institutional readiness across many educational settings. Teachers from under-resourced and rural areas highlighted the absence of reliable internet infrastructure, insufficient training, and outdated hardware, which pose substantial barriers to equitable AI adoption. These observations reflect findings from previous studies, which report that many schools in the Philippines remain unprepared for meaningful AI implementation (Bautista et al., 2024; Gamad et al., 2025). In response, participants emphasized the need for systemic interventions, including infrastructure development, AI-focused professional development, and the integration of digital competencies into teacher education curricula. Without such foundational support, AI may inadvertently exacerbate existing educational inequalities between urban and rural communities.

Ethical concerns were also a central theme, with participants expressing apprehension about data privacy violations, increased student surveillance, and the potential misuse of generative AI tools for plagiarism. Educators voiced the need for comprehensive policies that address academic integrity and digital ethics in AI-augmented learning environments. These concerns resonate with findings from recent literature, which highlight the urgency of institutional frameworks to govern the responsible use of AI in education (Khatri & Karki, 2023; Rane et al., 2024; Armstrong, 2024). Given the moral and civic responsibilities embedded within Philippine education, the ethical integration of AI must be prioritized. Schools must embed digital ethics into curricular content and professional practice, while fostering awareness through educator-led initiatives and community engagement.

Another significant insight that emerged was the call for participatory design in AI integration. Teachers advocated for their involvement in the co-development of AI tools, ensuring alignment with local pedagogical needs and cultural values. This perspective is consistent with the recommendations of Topali et al. (2025), who argue for human-centered learning analytics and stakeholder collaboration in educational technology design. Participants stressed that meaningful AI adoption requires national consultation, pilot testing, and continuous feedback from educators to prevent exclusionary practices and ensure contextual relevance. Teacher agency must be foregrounded in all stages of AI implementation, from planning to policy formulation.

In sum, the successful integration of AI in Philippine education necessitates a holistic strategy centered on human values, ethical safeguards, and institutional capacity. AI should be regarded not as a replacement for educators but as a supportive assistant that augments pedagogical effectiveness while preserving the irreplaceable human dimensions of teaching—empathy, ethics, and equity. Empowering Filipino teachers through sustained investment in digital infrastructure, inclusive training, and participatory policymaking is essential to building a future-ready, human-centered education system that responsibly embraces technological innovation.

Conclusion

This study investigated the lived experiences and professional perspectives of Filipino educators regarding the integration of Artificial Intelligence (AI) in the Philippine educational landscape. Through a qualitative phenomenological approach, the findings revealed that educators widely perceive AI as an instructional support mechanism rather than a replacement for the teacher. Participants acknowledged AI's potential to improve efficiency by automating tasks and personalizing content delivery; however, they consistently emphasized that AI lacks the capacity for empathy, moral discernment, and contextual responsiveness—qualities essential to effective teaching within the culturally grounded and values-based Philippine education system.

The study further uncovered structural barriers that hinder the responsible adoption of AI, including digital infrastructure limitations, gaps in teacher training, and growing ethical concerns such as data privacy and academic integrity. These challenges necessitate a cautious and inclusive approach to AI integration, grounded in teacher empowerment, ethical safeguards, and institutional support. Central to this approach is the preservation of the teacher's irreplaceable role as a mentor, moral guide, and relational anchor in the learning process. Nonetheless, the study is subject to certain limitations. The purposive sample, while diverse in regional and institutional scope, may not comprehensively represent the full spectrum of educator experiences across the country. Furthermore, the rapidly evolving nature of AI may influence future perceptions, rendering current insights potentially time-sensitive. Future research should thus explore longitudinal studies that assess changes in teacher attitudes over time, cross-national comparisons of AI integration practices, and quantitative studies evaluating the direct impact of AI on learner outcomes and pedagogical dynamics.

It is recommended that the integration of Artificial Intelligence (AI) in the Philippine education system adopt a teacher-centric framework. AI should be developed and deployed as a pedagogical ally that complements the professional responsibilities of teachers rather than substitutes for them. This includes using AI tools for lesson enhancement, content generation, feedback systems, and classroom management, while ensuring that human connection, ethical reasoning, and emotional responsiveness remain central to the teaching process. There is a need for the institutionalization of comprehensive national training programs, led by the Department of Education (DepEd) and the Commission on Higher Education (CHED), that focus on building the digital competencies and AI literacy of educators. Such programs should be embedded within pre-service and in-service teacher education curricula and must cover not only technical proficiency but also ethical use, pedagogical alignment, and classroom adaptability in AI-enhanced environments.

Policymakers should prioritize targeted investment in digital infrastructure, particularly in rural and under-resourced schools, to ensure equitable access to AI tools and platforms. Addressing disparities in internet connectivity, device availability, and IT support is essential to prevent the marginalization of already disadvantaged learner populations and to ensure inclusive participation in AI-driven educational innovations. In parallel, it is imperative to develop and implement robust ethical frameworks and regulatory guidelines governing the use of AI in educational contexts. These policies must address issues such as data privacy, algorithmic bias, academic integrity, and the potential deskilling of educators. Ethical oversight must be transparent, contextualized to Philippine values, and inclusive of diverse stakeholder voices, especially those of frontline educators.

The success of AI integration further depends on participatory design and bottom-up decision-making processes. Teachers should be recognized not as passive recipients but as active collaborators in the development and evaluation of AI technologies. Their experiential insights must inform national consultations, pilot implementations, and continuous policy review to ensure that AI systems align with pedagogical goals, classroom realities, and student needs. Finally, fostering cross-sector collaboration and public engagement is essential. National dialogue involving educators, technologists, policymakers, and civil society must be encouraged to co-create a shared vision for AI in education that respects local contexts and community values. Public awareness campaigns and research partnerships can facilitate responsible innovation and help build a sustainable, inclusive, and human-centered education system in the digital age.

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Affiliations and Corresponding Information

Apolinar B. Fudalan

University of the Visayas – Philippines