

AI in Action: Exploring Practice Teachers' Integration of Artificial Intelligence in Lesson Demonstrations

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Abstract

Artificial Intelligence (AI) plays a crucial role in our ever-evolving digital world. It benefits 21st-century citizens by offering a wide range of tools that drive technological advancements across various fields, including medicine, science, and, most importantly, the educational landscape. The integration of AI in education supports practice teachers by enabling innovative teaching practices, personalized learning experiences, and data-driven decision-making. Accordingly, this study explored the integration of artificial intelligence into the lesson demonstrations of practice teachers. It is anchored in George Siemens' Connectivism Theory, which posits that knowledge is distributed across networks and that learning occurs through connections between people, ideas, and resources. Employing a descriptive qualitative approach, the study identified five major themes and fourteen subthemes. Findings conclude that AI serves as a transformative tool that enhances instructional design, classroom engagement, and teacher confidence when thoughtfully integrated into lesson demonstrations. It is recommended that future research involve a larger and more diverse sample and explore broader dimensions of AI in education to deepen understanding and support effective implementation.

Keywords: Artificial Intelligence, practice teachers, lesson demonstrations, educational technology, instructional design.

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Introduction

AI has become pervasive in the lives of twenty-first-century citizens and is recognized as enhancing multiple sectors (Górriz et al., 2020). AI has been applied to various domains, such as visual and voice recognition, decision-making, and natural language processing and translation between languages, in forms, such as computer programs, applications, embedded control systems in

equipment, or robots (Preethiya. et al., 2024). AI in Education (AIEd) refers to the use of AI technologies in educational settings to facilitate teaching, learning, and decision-making by providing personalized guidance, support, and feedback to students. The use of distinct classes of educational technologies implies different philosophical and pedagogical perspectives, influencing the quality of learning and instruction (Hwang et al., 2020). AI has become a pressing matter in education due to the growing accessibility and adoption of AI-driven chatbots present in K-12 education and requires school personnel, leaders, and teachers to adapt (Mohammad Rafee et al., 2023). AI chatbots offer potential benefits in education, including increased student motivation, improved learning outcomes, personalized learning, and reduced workload for educators (Gökçearsan et al., 2024).

However, it is also important for educators to recognize the limitations of AI tools, understanding that every technology offers benefits and challenges, along with its inherent risks (Kotsis, 2024; Mohideen, 2024). Additionally, the research concludes that evolving technologies have the potential to change the traditional roles in colleges and universities, prompting educators to reconsider their purposes (Plattner et al., 2024). However, (Jose & Jayaron Jose, 2024) are concerned about AI causing job displacement, decreased critical thinking, and overreliance on AI. The study concludes that AI should be used as a tool to support human expertise, not replace it. Moreover, the next round of research needs to have a much broader subject approach (Wach et al., 2023). Studies with larger and more representative samples are essential to replicate this research design for broader generalization and to capture the similarities and differences across rural, urban, and suburban settings. In particular, the educational sector, specifically practice teachers, appears to be a significant and worthy focus for further investigation in the context of AI integration in lesson demonstrations.

Accordingly, this study aims to explore the integration of AI in the lesson demonstrations of Practice Teachers. It is anchored in George Siemens' Connectivism Theory, which posits that knowledge is distributed across networks and that learning occurs through connections between people, ideas, and resources. In the digital age, AI in education functions as part of this interconnected network, enabling students to engage in collaborative learning and develop skills to navigate diverse knowledge sources. In this context, it explores AI's role in digital learning networks, where students interact with diverse information sources, collaborate with peers, and develop adaptive teaching and learning techniques. Despite the growing body of research on AI in education, limited studies focus specifically on how practice teachers integrate AI into their instructional practices. Understanding their experiences can provide valuable insights into the effectiveness of AI-driven pedagogy in teacher education. Aligned with this, the study seeks to answer the research question: How do practice teachers integrate artificial intelligence into their lesson demonstrations?

Methodology

Research Design

This study used a qualitative descriptive research design, which aims to describe the experiences of practice teachers in integrating artificial intelligence into their lesson demonstrations. It is an approach that focuses on providing a comprehensive and straightforward description of experiences or phenomena as they naturally occur, aiming to preserve the details and meanings of participants' perspectives (Ghimire & Neupane, 2024). It is anchored in the Connectivism theory, which posits AI's role in digital learning networks, where practice teachers interact with diverse information sources, develop adaptive teaching and learning techniques, and access learning materials beyond the traditional classroom setting.

Informants

Nine (9) practice teachers from different specializations in the College of Education at a public university in the Philippines were selected through purposeful sampling techniques. The

inclusion criteria are as follows: (a) he/she is a bonafide student of the university in the school year 2024-2025; (b) he/she is on the College of Education student roster; (c) he/she is a practice teacher, (d) he/she is the current rank one in their respective specialization, and (e) integrating AI into his/her lesson demonstrations.

Research instrument

The instrument used in this study was a duly validated, researcher-made semi-structured interview guide designed to explore the experiences of practice teachers in integrating artificial intelligence into their lesson demonstrations. It allowed informants to express their beliefs, experiences, and acquired knowledge by recalling, considering, and evaluating their teaching practices—an approach grounded in reflective inquiry (Baque Guerra et al., 2024). Furthermore, the Connectivism Theory of George Siemens informed the development of the guide's open-ended questions, ensuring alignment with the theory's emphasis on learning through connections among people, ideas, and technological resources.

Data Collection Procedure

The data collection process began after the Dean of the college approved the letter to conduct the study. Both face-to-face and online settings were utilized for administering the data collection process in this study. It was conducted following systematic and planned steps. First, researchers identified nine practice teachers who met the inclusion criteria and could serve as informants for the study. Second, researchers sent a letter to the selected practice teachers—either an online or hard copy letter, depending on their convenience. The letter contained a brief background of the study, the conditions, and a set of interview questions. Third, once the practice teachers granted permission to participate as informants, a document containing the interview questions was sent to them for their responses online or in person. Lastly, the researchers compiled the informants' responses into a single electronic file for analysis. In this study, informants were informed about the study and were asked for their consent in writing. Furthermore, the researchers ensured to keep the informants' information private and anonymous throughout the study. Thus, a careful and thorough approach to collecting data was followed to ensure its validity and reliability.

Data Analysis Procedure

The data gathered from the informants was analyzed using the five steps of Thematic analysis, a qualitative research method used to identify, analyze, and report patterns or themes within data (Braun & Clarke, 2006). The process involves systematically examining the experiences of practice teachers in integrating artificial intelligence into their lesson demonstrations to uncover recurring ideas, concepts, or meanings. This method of analyzing qualitative data enabled researchers to identify patterns and formulate relevant themes based on the responses given by the informants (Abualrob, 2025). It gave the data transparent, rich, and detailed meaning, which helped in formulating the results.

Results

This study offers valuable insights of how practice teachers integrated Artificial Intelligence (AI) into their lesson demonstrations. To deepen the understanding of AI integration in the context of practice teaching, five significant themes emerged: (1) Applying AI for Instructional Design, (2) Utilizing AI as a Tool for Classroom Engagement, (3) Integrating AI to Personalize Learning According to Students' Needs, (4) Leveraging AI to Enhance Practice Teachers' Confidence, and (5) Navigating the Challenges of AI Integration. These themes encapsulate the multifaceted integration

of AI into lesson demonstrations and are further broken down into fourteen (14) recurring subthemes, each reflecting a different dimension of how AI influences instructional design, classroom engagement, personalized learning, teacher confidence, and the practical challenges encountered in its integration

Applying AI for Instructional Design

Practice teachers integrate artificial intelligence into their lesson demonstrations, particularly in the area of instructional design. It indicates that AI serves as a valuable resource, offering a variety of tools that enable practice teachers to design lessons that are more engaging, personalized, and efficient.

Using AI to Enhance Lesson Planning

AI plays a significant role in the lesson demonstrations of practice teachers, particularly in enhancing their lesson planning. Informants consistently reported frequent integration of AI tools during the planning phase of their lessons. Jen admitted, *"I use AI to prepare and enhance my lesson plans."* This illustrates how AI tools are being actively utilized by practice teachers to support and improve the lesson preparation process.

Integrating AI in Crafting Instructional Materials

Practice teachers frequently utilize AI tools to create their instructional materials, such as visuals, presentations, and other classroom resources, which helps make the preparation process more efficient and manageable. Jen explained, *"I use AI to prepare my presentations for my lesson demonstration... I mostly use Canva because it has templates that help me introduce new concepts to students... I use this to ensure that the elements are interactive and engaging for the students."* Similarly, LG emphasized, *"AI is a big thing and it has lots of features that could really make your lessons and presentations creative and fun."* These statements highlight how practice teachers actively leverage AI platforms like Canva to enhance their instructional materials by using ready-made templates and interactive features for presentations, worksheets, and motivational content.

Employing AI for Assessment Creation

AI tools significantly contribute to the lesson demonstration process of practice teachers, especially in the creation of student assessments. Informants acknowledged using AI to ensure their assessments are accurate, aligned with learning objectives, and tailored to meet student needs. Jads remarked, *"I use AI to help me with my assessments for the students because it ensures they are in line with my learning objectives... It helps indicate whether the assessment is proper, accurate, and aligned with what I intend to teach."* This reflects how practice teachers are actively exploring the use of AI tools to develop assessments that are precise, instructional goal-oriented, and responsive to the diverse needs of their students.

Utilizing AI as Language Support

Practice teachers have found AI tools valuable for language support, helping them improve the clarity and accuracy of their instructional content. Informants reported using AI for grammar checks, translations, and language refinement during lesson preparation. Kyle shared, *"I use AI especially when there are terms I'm not familiar with and I need clarification or further understanding."* Feb added, *"During my exchange student teaching in Jakarta, Indonesia, the language barrier was a real challenge since most people there do not speak English. One of the AI*

tools I used was Google Translate, which helped me translate my English lesson plans into Indonesian. This allowed my cooperating teacher to understand what I would be teaching, and it also helped me communicate better with the students.” Likewise, Faith also admitted, “I use Grammarly to check my grammar. It also suggests words and phrases to make my sentences more accurate and easier to understand. Secondly, I use Quillbot as a paraphrasing tool to avoid redundancy and repetition in the words and sentences I use.” These examples illustrate how AI-powered tools are used to refine grammar and improve the clarity and accuracy of instructional materials.

Ensuring Timely Delivery of Lessons through AI Assistance

AI assistance plays a significant role in helping practice teachers deliver their lessons on time. Several informants reported that AI tools aid in time management, organization, and keeping lessons on schedule during their demonstrations. Kyle shared, “AI makes my work easier, especially as a teacher with many responsibilities. For example, when I teach a topic like nobela (novel), which is quite lengthy, AI helps simplify the content for students and ensures that the lesson is completed on time.” Paolo also emphasized, “AI makes sure that every minute is used wisely.” These accounts illustrate how some practice teachers use AI tools both to simplify complex content and to effectively manage their instructional time, particularly when facing the challenges of limited class periods.

Utilizing AI as a Tool for Classroom Engagement

Practice teachers integrated artificial intelligence to enhance student participation and interest during lessons. Through the use of interactive features and gamified strategies, AI contributed to the creation of dynamic and learner-centered classroom experiences.

Gamification through AI Tools

AI serves as a significant aid in making lessons more engaging. Informants consistently shared how AI tools suggested educational games that aligned with lesson objectives and enhanced student interaction. Kyle explained, “With the help of AI, we were able to generate games that can be used as a basis for teaching in our demo teaching and lessons. I find it helpful in game suggestions where students can interact with each other as well as my lesson become more interactive.” Utilizing AI tools introduce gamified approaches in teaching, enhancing not only student engagement but also instructional delivery.

Employing AI to Improve Motivational Activities

Another recurring pattern that emerged from the data was the use of AI to enhance motivational hooks in lesson introductions. Informants mentioned that AI tools were helpful in generating captivating ideas that could spark learners’ curiosity and interest at the beginning of a lesson. Kyle reflected, “...the hangman or BITAY is one of the motivational activities suggested by AI. I used it in the hook part which helped my students to enhance their vocabulary in Filipino.” Nins noted, “With the help of AI, kids actually did enjoy motivational activities like the word wall and mystery box. So you can actually see that it is interactive and fun for the kids.” The use of AI tools to come up with engaging motivational strategies help spark student interest and support smooth transitions during lessons.

Integrating AI to Personalize Learning Based on Students’ Needs

To cater to the unique needs and capabilities of their students, practice teachers use AI. This highlights how practice teachers utilized AI to address individual differences, adapting instruction to students' varying needs, comprehension levels, and learning styles.

Tailoring Lessons Based on Student Performance and Comprehension

Several informants shared that AI helped them simplify topics and adjust the complexity of their language to match student comprehension levels. This highlights how AI became a tool for differentiating instruction in practical and accessible ways. Ma'am Dan shared, *"AI gives me ideas on what appropriate words to use for my lesson—like, is it suitable for Grade 6, for Grade 4, and so on."* LG explained, *"For example, one of my topics is Romeo and Juliet. It's difficult to find a very comprehensive lesson on my topic because sometimes the only material we receive is just the topic and the book itself. It is not fully detailed, so I really have to search the internet for how I can deliver it to my students. For the characters, I just ask help from ChatGPT to explain more about those characters or summarize because the class is only for one hour."* Serving as a support system, AI helps practice teachers adapt their language and instructional strategies to align with the cognitive levels of their learners.

Exploring AI Strategies in Handling Diverse Learners

AI helped practice teachers address the varied learning styles and needs present in their classrooms. AI tools were used to suggest differentiated strategies that enhanced inclusivity and engagement. Paolo noted, *"AI tells me how to deliver ideas to students by suggesting techniques such as mnemonics and active learning strategies."* Kyle remarked, *"AI helped me so much on what is the better teaching strategy to use based on the diversity of learners... It enables me to be engaging to my students by suggesting teaching strategies in a way that I could gain the interest of the students."* Jads also reflected, *"AI suggests strategies that sometimes, you cannot think of if you just rely on your own. AI gives suggestions like to use digital media which is helpful in making the class more interactive and interesting for students."* By supporting instructional planning, AI helps practice teachers respond to learner diversity and adopt more inclusive and adaptive teaching approaches.

Leveraging AI to Boost Practice Teachers' Confidence

The use of AI tools contributes positively to their lesson demonstration. AI serves as a supportive resource that enhances their ability to create engaging materials and structure lessons more effectively.

Encouraging Positive Student Responses to AI-Improved Classroom Activities

Positive student feedback on AI-improved classroom activities has inspired practice teachers to keep using AI tools in their lesson planning and teaching. The engaging and interactive materials generated with AI contributed to increased student participation and interest during class. Feb stated, *"It's really effective in capturing the attention of the students,"* while Ma'am Dan admitted, *"According to their comments, they really enjoyed the activities, these types of games, and as a teacher, I take credit for this and share it with the AI itself."* Faith added, *"The results of their assessment were also positive,"* and LG remarked, *"One of my students told me that this is the first time they've felt motivated to listen to the English lessons because of my teaching strategies."* These reactions reflect how AI-assisted materials contributed to greater student participation, interest, and enjoyment during classroom learning. Some also shared how the students' responses influenced their motivation and confidence in incorporating AI into their lesson demonstration.

Giving Confidence in Delivering Lessons

Building confidence in delivering lessons shows how AI tools help practice teachers feel more prepared and self-assured during their lesson demonstrations. By providing structured content and resources, AI supports teachers in organizing their lessons effectively and anticipating student needs. Jads shared, “So the benefit is that you become confident because you have already consulted with AI.” LG added, “Students and teachers become more empowered when using AI.” These insights reveal how practice teachers experienced increased confidence during their teaching demonstrations after using AI tools for support in planning and preparation.

Navigating Challenges in Integrating AI

The integration of artificial intelligence tools in lesson demonstrations is hindered by several practical and functional issues. While AI offers significant potential, its effectiveness is often compromised by limitations that affect practice teachers' experience and reliability.

Writing Specific Prompts

When AI failed to generate their intended ideas, this led them to put in more effort to craft precise and detailed prompts to achieve their desired outcomes. Jen admitted, “There are times that AI could not generate images, especially generating images so I must be specific with what I want. AI needs a thorough prompting.” This experience highlights that challenges with AI made practice teachers adjust their approach, emphasizing the need for clear and specific prompts to better align the generated content with their intended outcomes.

Finding Other Sources

Encountering inaccurate or outdated information from AI, practice teachers tend to seek additional references for verification and content enhancement. Feb shared, “Google translator is not everything and not accurate at all times. That's why, during my stay in Indonesia, I have been using Google Translate but I also confirmed it with my Indonesian buddy.” Ma'am Dan stated, “There were times when AI did not give correct answers and gave different responses, so the best thing I did was to search and also consider the references.” These responses indicate that some practice teachers addressed instances of inaccuracy in AI-generated content by cross-checking information and consulting additional sources to support their lesson preparation.

Applying Human Intervention

Many practice teachers said that effectively integrating AI into their teaching required consistent human intervention. What initially seemed like a convenient way to generate content often demanded additional effort to refine and adapt AI outputs, ensuring they were relevant, clear, and appropriate for classroom use. Feb remarked, “*We need human intervention as well.*” Ma'am Dan shared, “*I usually ask my cooperating teacher because I know they know more about that specific topic that I will teach to the children.*” Jen added, “*They cannot really provide real images, and they seem to be AI-generated, so you have to layout on your own.*” These responses describe how practice teachers engaged in modifying and evaluating AI-generated content, emphasizing the ongoing need for human input to adapt materials for specific classroom contexts.

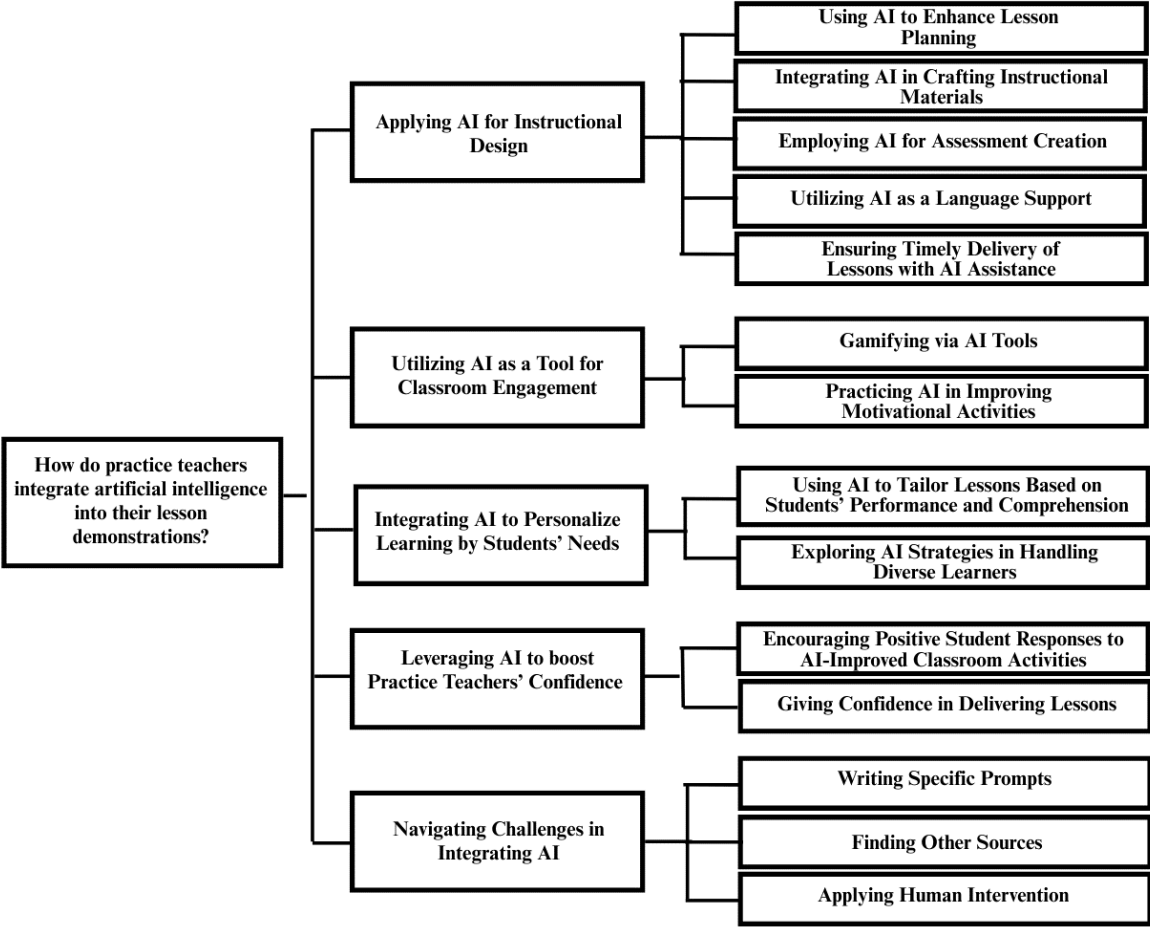


Figure 1. Thematic Map of Practice Teachers’ Integration Of Ai Into Their Lesson Demonstrations

Discussion

This study explored how practice teachers utilize AI tools in various aspects of instructional design, revealing emerging patterns in their lesson planning, material development, assessment creation, and classroom engagement strategies. By examining these practices through the lens of Connectivism, the study highlights how AI functions as a digital partner in shaping instructional choices, supporting differentiation, and enhancing both teacher confidence and student participation. Applying AI in instructional design was a common theme in the integration practices of practice teachers. Informants described how AI tools were central to their instructional planning, particularly for preparing lessons, constructing materials, and designing assessments. Most used AI as a "convenient," "efficiency-enhancing," and "creative" tool through which they were able to design coherent and engaging lessons and tests more efficiently. Especially in the fast-paced requirements of demonstration teaching, the ability to generate ideas, refine wording, and align content with specific learning goals was considered highly desirable. Therefore, the findings of this research affirm the growing usefulness and significance of AI in practice teachers' lesson design processes. It is apparent from all of the themes—improving lesson planning, developing educational resources, making assessments, offering language assistance, and guaranteeing on-time lesson delivery—that AI is a valuable and transformational learning tool. One of the significant shifts in practice teachers' pedagogical design approach is the increased integration of AI into lesson planning. As per study participants, AI software is regularly employed to develop ideas, sequence content, and ensure consistency with learning objectives. This aligns with what (Kehoe, 2023) observed, highlighting

that ChatGPT and AI lesson generators are just some of the AI-enabled resources that are capable of providing novice educators scaffolding through suggesting age-inappropriate content, pacing instructions, and differentiated instruction approaches. By reducing cognitive load, these resources allow practice teachers to focus more on pedagogical effectiveness and less on administrative tasks. AI appears to enhance creativity and interest in the design of teaching materials. Resources such as Canva, which include pre-designed templates and multimedia resources to facilitate the presentation of difficult content, were particularly favored by the participants. The findings of (Luckin & Cukurova, 2019), who argue that AI enhances learning design through the rapid development of personalized, engaging, and interactive content, support this.

The AI application used by practice teachers in the study was principally productivity-oriented, as opposed to more advanced adaptive systems that change content in real-time in response to student feedback (e.g., intelligent tutoring systems). This indicates one area in which pre-service education could incorporate additional advanced AI literacy. The findings also demonstrate ways in which AI is becoming utilized to develop assessments. In an effort to ensure that assessments are learner diverse and aligned with instruction, participants recognized the application of AI. (Denston et al., 2022) also noted the same, pointing out that AI applications such as test generators and analytics platforms assist instructors in developing tests that are valid, fair, and reliable. Though AI can assist with draft initial assessment, critics such as (Apetorgbor et al., 2024) caution against overdependence on it, noting that computational tools may not always fully consider complicated learning results or cultural settings, reinforcing teacher oversight. The function of AI as a language assistance tool was found particularly useful for practice teachers working in multilingual or global environments. Participants employed software like Grammarly, Quillbot, and Google Translate to rewrite grammar, paraphrase, and overcome language limitations. Findings are paralleled in a study by (Wang & Vásquez, 2012), which established that AI-driven language software assists second-language instructors in enhancing clarity and understanding in teaching materials. However, as (Liang et al., 2023) suggest, while AI tools offer language support, their effectiveness depends on the user's critical engagement with the output, as AI may not always capture contextual nuances or educational tone. AI's contribution to the timely delivery of lessons underscores its value in educational time management. Practice teachers in this research utilized AI to break down lengthy subjects, remain well-organized, and optimize teaching time—essential abilities when dealing with the rapid-fire demands of the classroom. This aligns with the findings of (Nanyang Polytechnic, Singapore et al., 2020), who illustrated that real-time analytics tools such as Lumilo help teachers by indicating student needs and cutting down time spent on detecting gaps in learning. In addition, hybrid human–AI tutoring models significantly enhance efficiency and expertise, particularly for lower-performing students, as indicated by (Van Leeuwen et al., 2022). Teachers' decision-making is aided by intelligent cognitive assistants while allowing pedagogical control, as noted by (Le & Wartschinski, 2018). However, as (Williamson & Eynon, 2020) note, time savings does not necessarily equate to quality instruction; instead, the effective implementation of AI should rest on sound pedagogical judgment.

Utilizing AI as a tool for classroom engagement emerged as a significant theme in the integration practices of practice teachers. The informants outlined how artificial intelligence contributed to active student participation and maintaining interest in the course of classroom learning. In particular, AI was used to produce interactive learning experiences by way of gamified approaches and activity-based motivational tools. These technologies were regarded as useful supports in working to change conventional teaching techniques into more engaging and student-focused ones. AI integration not only facilitated learner interest but also assisted educators in presenting lessons that were both fun and pedagogically aligned. Gamification using AI tools became an effective tactic in engaging students and fostering interactive learning. Informants consistently shared that AI tools assisted them in creating educational games that were tied to lesson objectives, making lessons more engaging and interactive in the classroom. In addition, this concurs with (Alenezi, 2023), which discovered that gamified AI-based tools like virtual learning environments

greatly enhance emotional engagement and motivation. Using AI to enhance motivational activities is another sub-theme emphasizing how AI was employed to create engaging lesson introductions or "hooks." Informants mentioned using AI to create engaging and interactive motivational measures that piqued curiosity and facilitated easier transition into the actual lesson. This indicates that AI is crucial in assisting instructors in creating learner-focused hooks for engaging early participation. This is also reinforced by (Samur & Cömert, 2024), who observed that gamified AI learning spaces with immediate feedback and interactive functions promote both engagement and knowledge recall.

The integration of AI to tailor learning based on students' needs emerged as a key theme in the instructional practices of practice teachers. AI tools were explained by informants to provide support for their capacity to meet specific needs, levels of understanding, and learning styles of students. More specifically, using AI, practice teachers were able to break down complicated concepts, customize instruction language, and apply strategies that differentiated to individual learners. Consequently, the tools gave them the power to be more responsive to the diversity within the classroom so that lessons could be both accessible and inclusive. Across the board in all responses, AI was seen as an ally which gave them insight, recommendations, and strategies that made instructional flexibility and creativity possible. Informants highlighted that AI assisted them in tuning the complexity of language and content according to learners' developmental levels. AI tools made suggestions for making lessons simpler, age-appropriate, and easy to comprehend. This itself is a good example of how AI assists differentiated instruction as it allows practice teachers to scaffold content accordingly. (Sung et al., 2016) work also revealed in a similar manner that AI facilitates more active engagement through the provision of personal and customized content that suits the level of proficiency of the students. This, in turn, leads to more active participation. Additionally, the results conform to the fundamental tenets of Universal Design for Learning (UDL) that advocates for the adoption of adaptable approaches and tools to address diverse needs of all learners. They also outlined how they used AI to oversee and adapt classroom diversity by looking into AI approaches in addressing various learners. The evidence shows how AI acted as a responsive guide, recommending several teaching strategies encouraging inclusivity as well as learner engagement. These findings highlight the applied utility of AI in designing inclusive, student-focussed learning spaces where instructors can address diverse classroom demands better. (Zawacki-Richter et al., 2019) affirm this by stating that AI, when properly implemented, can boost adaptive and inclusive learning spaces by providing diverse instructional strategies.

Using AI to enhance practice teachers' confidence illustrated how AI-supported materials promoted positive student reactions, leading to sustained use of such materials. Informants reported increased levels of student motivation, engagement, and satisfaction, which collectively enhanced their confidence as teachers. They repeatedly emphasized that the interactive feature of AI-supported materials fostered greater student participation, which validated their teaching decisions. Correspondingly, such responses motivated practice teachers to keep using AI tools and to continue innovating. Informants mentioned that AI-automated activities engaged, enthused, and paid closer attention in class by students, whereby such responses positively affected practice teachers' confidence levels. The engagement of the learners was immediate feedback, validating the effectiveness of their pedagogical approaches and enhancing their confidence in these. This also corresponds to evidence presented by (Al-Mansouri, 2024), which found that enhanced student participation enabled through AI systems enhances teachers' confidence and faith in using AI. This supports that constructive learner feedback can greatly enhance teacher confidence and devotion to incorporating AI. AI's virtual co-designer role in lesson demonstrations is enhanced by its role as teaching support that builds confidence when delivering classes. Informants reported that they were better prepared for their lesson demonstrations when assisted by AI because it enabled them to concentrate more on classroom interaction and delivery in class in real-time since AI lowers mental tasks and offers clean content structures. AI served that purpose by providing lesson material, activity ideas, and demonstration methods. This research supports (Trust & Whalen, 2020) conclusion that pre-service teachers who interact with new technologies within authentic situations, for example,

during demonstrations for lessons, build more robust digital skills and increased self-efficacy. (Yang et al., 2024) also give support to this finding, having found that AI-enhanced strategies support teacher self-efficacy by reducing preparation anxiety and developing professional growth. This was evident in the present study, where the use of AI tools during lesson demonstrations encouraged both innovation and confidence among informants.

The navigation of challenges of practice teachers in integrating AI revealed that AI provided valuable instructional support, but it has limitations that require critical human effort. These are functions that highlight the importance of teacher agency and judgment in AI-enhanced teaching. These findings show that AI is a complement to teacher knowledge and not a replacement, and there must be judicious management. Practice teachers did not merely rely on the products of AI; instead, they actively intervened to shape, polish, and position them to meet their own classroom demands. Writing detailed prompts highlights the intellectual work of getting AI tools to perform well. Some informants described that when the outputs of AI proved disappointing, they wrote more accurate and specific prompts to achieve the desired outputs. This aligns with the argument made by (Talarico, 2023), who highlighted that AI systems rely very much on input quality and are devoid of contextual sensitivity that human users ensure. This adjustment indicates that the quality of AI application, at least for them, directly correlated with how well and accurately they defined their inputs. Furthermore, seeking alternative sources is an indicator of another difficulty: the credibility of AI-produced information. The informants explained situations where AI software outputted outdated, incomplete, or erroneous information, which made them double-check information with external sources, indicating the need for critical examination. This finding agrees with the study conducted by (Zawacki-Richter et al., 2019), where it was indicated that AI in education rarely replicates contextual accuracy so as to demonstrate lessons appropriately. On the other hand, (Smutny & Schreiberova, 2020) pointed out that AI technologies like chatbots and virtual assistants support learning but must be supplemented with verification because they cannot comprehend intricate educational settings. These findings reveal that for practice teachers, the role of AI remains supplementary, requiring careful review and additional referencing to ensure accuracy and appropriateness in lesson demonstrations. Applying human intervention illustrates the indispensable role of teachers as the foundation and the modifier of AI-generated content for instructional use. Informants indicated that although AI products might provide suggestions, those must be developed to suit the grade level needs, learning styles, and pedagogical objectives. In this context, the teacher's role is not eliminated but enhanced. This is echoed in (Perrotta & Selwyn, 2020), who argue that AI tools lack the meticulous pedagogical judgement required for effective classroom use and therefore must be mediated by teachers who can contextualize and refine AI suggestions.

While this study has discussed how practice teachers incorporate artificial intelligence into their lesson demonstrations, there are a number of limitations that must be taken into account and addressed in future studies. First, the research focused on practice teachers only from the university where this research was undertaken. Further data in other schools or places in other parts of the Philippines are needed to increase the scope and generalizability of the results. Also, the informants were restricted to only nine (9) practice teachers with different specializations in education. It is advised to scope the research more widely to include a larger sample of practice teachers. Second, because the present study utilized a descriptive-qualitative research design, it is suggested to use quantitative or mixed-method approaches. Third, the research only examined the use of AI by practice teachers who demonstrate lessons through AI tools. Research into AI implementation in education requires future investigations to explore its pedagogical effects together with implementation challenges and ethical aspects and student learning outcomes and teaching practice effects. Fourth, the research gathered data exclusively from practice teachers' opinions for its analysis. Future research should include multiple stakeholders such as students and in-service teachers and school administrators and policymakers. The existing study presents sufficient data despite its limitations to advance the current discourse regarding educational AI adoption. Future research can base its

investigations on these findings to develop teacher preparation strategies and pedagogical technological innovations and education policy formulation.

Conclusion

Practice teachers are harnessing AI not just as a tool but as a transformation agent, streamlining lesson planning, elevating materials, generating engaging assessments, refining language, managing time, and boosting student interaction, while igniting teacher confidence and creativity. It demonstrates that AI functions as a powerful supporting tool rather than a replacement. Additionally, AI can ignite a virtuous cycle, empowering teachers to design personalized, creative, and inclusive lessons that truly engage students, marking a pivotal moment in education where human wisdom and artificial intelligence converge to reshape the future of learning. AI plays a crucial role in our ever-evolving digital world. It benefits 21st-century citizens by offering a wide range of tools that drive technological advancements across various fields, including medicine, science, and, most importantly, the educational landscape. The integration of AI in education supports practice teachers by enabling innovative teaching practices, personalized learning experiences, and data-driven decision-making. Accordingly, this study explored the integration of artificial intelligence into the lesson demonstrations of practice teachers. It is anchored in George Siemens' Connectivism Theory, which posits that knowledge is distributed across networks and that learning occurs through connections between people, ideas, and resources. Findings conclude that AI serves as a transformative tool that enhances instructional design, classroom engagement, and teacher confidence when thoughtfully integrated into lesson demonstrations. It is recommended that future research involve a larger and more diverse sample and explore broader dimensions of AI in education to deepen understanding and support effective implementation. This study faces generalizability limitations as it employed a descriptive qualitative approach focusing solely on teacher practice within a single, specific context. The data collection was confined to lesson demonstrations, meaning it did not capture long-term usage patterns or the sustained impact of AI on actual student learning outcomes. Future research should incorporate a mixed-methods approach (including quantitative data) to enhance validity. It is also essential to involve a larger and more diverse sample to improve generalizability. Most importantly, longitudinal studies must be conducted to evaluate the long-term efficacy of AI integration in relation to sustained improvements in student learning outcomes.

Conflicts of Interest

No Conflict of Interest

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