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Exploring Filipino Language Educators' Perceptions and Pedagogical Adaptations in AI-Integrated Instruction

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Abstract

This study explores the integration of artificial intelligence (AI) tools in Filipino language instruction, focusing on educators' perceptions, challenges, and pedagogical adaptations. Grounded in Constructivist Learning Theory and Technological Pedagogical Content Knowledge (TPACK) Framework, the study employs a qualitative research design through semi-structured interviews with Filipino language educators. Findings reveal that AI is perceived as a supportive tool for assessment and student engagement, but concerns persist regarding content accuracy and cultural alignment. Challenges such as the digital divide and AI's limitations in processing Filipino linguistic structures hinder full adoption, particularly in underserved communities. However, educators recognize AI's potential to enhance student engagement through gamification and personalized learning, prompting a shift towards a blended learning approach that balances digital tools with traditional instruction. The study underscores the need for continuous professional development and institutional support to optimize AI integration. Recommendations include localized AI development and equitable access to AI-driven resources to ensure culturally relevant and inclusive language instruction.

Keywords: Artificial Intelligence, Filipino Language Instruction, Pedagogy, Blended Learning, Digital Divide, AI in Education, Constructivist Learning, TPACK, Teacher Adaptation

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Introduction

Artificial intelligence (AI) has rapidly advanced in recent years, reshaping multiple fields, including education. In language instruction, AI-powered applications have transformed pedagogical practices by introducing tools for automated assessment, personalized learning, and interactive feedback (Zawacki-Richter et al., 2019). For Filipino language educators, this development presents opportunities to enhance student engagement, improve instructional efficiency, and diversify teaching strategies. However, the integration of AI in Filipino language classrooms also raises critical questions about its effectiveness, the readiness of teachers, and the implications for culturally embedded pedagogies. Many educators acknowledge the benefits of AI for tasks such as grammar checking and instant feedback. However, concerns remain regarding the accuracy of AI-generated outputs in capturing the nuances of Filipino syntax, idioms, and cultural contexts (Tupas, 2020). Furthermore, challenges such as limited digital literacy, insufficient training, and unequal access to technology, particularly in rural and underfunded schools, create disparities in implementation (Flor, 2021). These realities highlight the need to examine how Filipino language teachers perceive and adapt to AI-driven educational innovations, ensuring that such integration aligns with national learning goals while preserving linguistic and cultural integrity.

AI has become increasingly influential in language education, with applications ranging from intelligent tutoring systems to natural language processing (NLP) tools and speech recognition software (Holmes et al., 2019). Research shows that AI can provide personalized learning pathways, assess learner proficiency levels, and deliver real-time corrective feedback (Chen et al., 2020). Chou et al. (2021) found that AI-assisted platforms improve fluency and comprehension by tailoring tasks to student needs. Similarly, adaptive learning environments allow educators to combine AI resources with classroom instruction, resulting in more dynamic and student-centered learning experiences (Ng, 2021).

AI has been associated with pedagogical shifts, particularly in blended learning, adaptive instruction, and competency-based education (Luckin et al., 2016). AI-powered systems enhance interactivity through gamified quizzes, automated writing assessments, and comprehension checks (Holmes et al., 2021). Automated essay scoring and speech analysis tools also help teachers track progress and provide personalized feedback more efficiently (Chen et al., 2020). These innovations suggest that AI can complement traditional teaching by streamlining repetitive tasks, allowing educators to devote more time to critical thinking and cultural instruction.

Despite its benefits, AI adoption in education faces multiple challenges. Studies highlight barriers such as inadequate digital literacy among teachers, insufficient institutional support, and apprehension that AI might undermine established teaching practices (Cabardo, 2020; Zawacki-Richter et al., 2019). Flor (2021) emphasizes that rural schools often lack reliable internet access and updated digital infrastructure, widening the digital divide. Furthermore, AI technologies trained primarily on dominant languages such as English and Mandarin struggle to account for Filipino's linguistic complexity and cultural specificity, resulting in inaccurate translations and assessments (Tupas, 2020). These limitations require educators to continuously monitor and adapt AI-generated materials to maintain cultural authenticity and pedagogical effectiveness.

Although there is a growing body of research on AI in education, most studies focus on English or other global languages, with little attention given to Filipino language instruction. It leaves gaps in understanding how AI impacts Filipino teachers' strategies, attitudes, and readiness to integrate digital tools. Moreover, while existing literature often emphasizes the technical capacities of AI, fewer studies explore human factors such as teacher training, professional development, and pedagogical adaptation (Zawacki-Richter et al., 2019). Addressing these gaps ensures that AI is technologically adequate, culturally relevant, and educationally inclusive.

While integrating artificial intelligence (AI) in education has been widely studied across various contexts, most existing research predominantly focuses on global languages such as English, Mandarin, and Spanish (Zawacki-Richter et al., 2019; Chen et al., 2020). These studies emphasize the technical capabilities of AI-driven tools in enhancing language acquisition, including personalized learning pathways, automated feedback, and adaptive instruction. However, limited scholarship explicitly examines how AI is being integrated into teaching the Filipino language, a subject with linguistic complexity and deep cultural significance. Unlike English or Mandarin, Filipino has unique morphological structures, regional dialectical variations, and culturally embedded idiomatic expressions that present challenges for AI models primarily trained on data from dominant global languages (Tupas, 2020).

Furthermore, existing literature often foregrounds the technological potential of AI while overlooking the human dimension of its adoption. Issues such as teachers' digital literacy, readiness to integrate AI into classroom instruction, and perceptions of its pedagogical value remain underexplored, especially in the Philippine context (Cabardo, 2020; Flor, 2021). Studies tend to highlight innovations in AI-driven education but give less attention to how educators adapt traditional teaching strategies, balance cultural authenticity with technological innovation, and address

ethical concerns about AI-generated content. Moreover, while international scholarship acknowledges the role of AI in reducing educational inequalities, little research has examined how structural challenges in the Philippines, such as the digital divide, unstable internet infrastructure, and limited access to updated digital tools in rural schools, affect the equitable use of AI in Filipino language education (Cui & Zhang, 2022).

This gap indicates the need for research beyond technical evaluations of AI tools and instead focuses on the lived experiences, perceptions, and adaptive strategies of Filipino language educators. By situating AI integration within the linguistic, cultural, and socio-economic realities of the Philippines, such research can provide nuanced insights into the opportunities and limitations of AI-driven instruction. Addressing this gap is critical in ensuring that AI adoption aligns with the goals of inclusive education, cultural preservation, and equitable access to technological innovations.

This study addresses these gaps by exploring Filipino language educators' perceptions and pedagogical adaptations in AI-integrated instruction. By examining challenges such as training, accuracy, and accessibility, as well as opportunities for enhancing engagement and assessment, the study contributes to broader discussions on AI in education. It also aligns with Sustainable Development Goal (SDG) 4 on Quality Education by promoting inclusive and equitable learning, SDG 9 on Industry, Innovation, and Infrastructure by highlighting the role of technological advancement, and SDG 10 on Reduced Inequalities by advocating equitable access to AI-powered tools for students of diverse socio-economic backgrounds.

Objectives of the Study

1. To explore the perceptions and experiences of Filipino language educators in integrating AI tools into language instruction.
2. Examine the challenges and opportunities associated with AI adoption in teaching the Filipino language.
3. To analyze Filipino language teachers' pedagogical strategies and instructional adaptations in response to AI-driven educational innovations.

Conceptual Framework

This study is grounded in the intersection of artificial intelligence (AI), pedagogy, and Filipino language instruction, focusing on how educators perceive and adapt to AI-driven teaching methods. The conceptual framework is informed by

constructivist learning theory, which emphasizes the active role of teachers and learners in constructing knowledge, and the technological pedagogical content knowledge (TPACK) framework, which highlights the integration of technology, pedagogy, and subject matter expertise in teaching.

In this study, AI tools serve as the technological component, encompassing intelligent tutoring systems, automated assessment tools, and AI-driven content generators that support Filipino language instruction. Filipino language pedagogy represents the subject matter component, emphasizing culturally responsive teaching, linguistic accuracy, and effective language acquisition strategies. The pedagogical component focuses on the instructional adaptations made by teachers, including blended learning approaches, AI-assisted feedback mechanisms, and digital literacy development. The study examines the interplay between these elements, particularly how Filipino language educators perceive AI's impact, navigate challenges, and modify their teaching strategies. The framework also considers external factors such as institutional support, professional development opportunities, and accessibility of AI tools, which influence the extent and effectiveness of AI integration in language instruction.

By exploring these dimensions, the study aims to provide a holistic understanding of how AI reshapes Filipino language education and what pedagogical shifts are necessary to maximize its benefits while maintaining linguistic and cultural integrity.

Discussion of Results and Findings

The perceptions and experiences of Filipino language educators in integrating artificial intelligence (AI) tools into instruction reveal both opportunities and challenges in the evolving language education landscape. Many educators view AI as a supportive tool that enhances teaching efficiency by automating routine tasks such as grammar checks and writing assessments, allowing teachers to focus on fostering students' creativity and deeper comprehension. AI-powered applications that provide instant feedback make learning more interactive, engaging, and responsive to students' needs. Despite these benefits, educators emphasized that AI should remain a complementary aid rather than a replacement for human instruction, underscoring the importance of balance between technology and pedagogy. At the same time, concerns were raised regarding the accuracy of AI outputs in Filipino language learning, particularly in handling idiomatic expressions and culturally embedded contexts. Teachers reported the need to double-check AI-generated translations and

exercises, highlighting the limitations of models trained predominantly on English and other dominant languages. These insights highlight the importance of developing localized AI training datasets and culturally responsive frameworks to ensure that technology supports Filipino language education meaningfully.

Perceptions and Experiences of Filipino Language Educators in Integrating AI Tools into Language Instruction

AI as a Supportive Tool for Language Teaching

“AI tools help me assess students’ grammar and writing faster, allowing me to focus more on guiding their creativity and deeper comprehension.”

“Using AI-powered language applications, I can provide students instant feedback, making the learning process more interactive and engaging.”

The responses highlight that educators perceive AI as a beneficial tool in language instruction, particularly in automating assessments and providing immediate feedback. AI’s ability to facilitate student engagement through interactive applications enhances language learning. However, educators still see AI as a complementary tool rather than a replacement for traditional teaching, emphasizing the need for a balanced approach to integrating technology with human instruction.

Concerns Over AI’s Accuracy in Filipino Language Learning

“AI-generated translations and grammar corrections are sometimes inaccurate, especially for Filipino idioms and deep cultural contexts.”

“I still double-check AI-generated exercises to ensure they are grammatically and culturally appropriate for my students.”

Educators express concerns over AI’s linguistic and cultural accuracy in Filipino language instruction. Since AI models are primarily trained on dominant languages like English, they often struggle with context-specific Filipino expressions, leading teachers to verify AI-generated content manually. It suggests the need for localized AI training datasets to improve AI’s relevance to Filipino language education.

To Examine the Challenges and Opportunities Associated with AI Adoption in Teaching the Filipino Language

The integration of artificial intelligence (AI) tools in Filipino language teaching presents both challenges and opportunities, primarily shaped by issues of accessibility and pedagogical innovation. On one hand, the digital divide continues to pose significant barriers, particularly in rural and underfunded schools where unstable

internet connections and outdated devices hinder the consistent use of AI platforms. Such limitations extend beyond the classroom, as not all students have access to AI-powered applications at home, leading to inequalities in learning experiences and outcomes. These challenges highlight the urgent need for government initiatives and institutional support to bridge technological gaps and ensure equitable access to digital resources. On the other hand, educators recognize the potential of AI to enhance student engagement through gamification, interactive quizzes, and personalized learning activities. By transforming traditional lessons into dynamic, student-centered experiences, AI fosters motivation, encourages active participation, and supports differentiated instruction. This dual reality underscores the importance of addressing infrastructure challenges while maximizing AI's capacity to enrich Filipino language learning.

Digital Divide and Accessibility Issues

"In rural schools, we struggle with unstable internet connections and outdated devices, making AI tools difficult to use regularly."

"Not all students have access to AI-powered learning platforms at home, which creates inequality in learning experiences."

The digital divide is a significant barrier to AI adoption, especially in rural and underfunded schools. Limited access to technology and unstable internet connections hinders the effective use of AI in Filipino language teaching. It highlights the need for government initiatives and institutional support to provide equitable access to digital resources.

AI as a Tool for Enhancing Student Engagement

"Gamified AI applications make learning Filipino more exciting for students, especially those who find traditional lessons boring."

"AI helps me create interactive quizzes and exercises that motivate students to participate in class."

Educators recognize that AI enhances student motivation and engagement through gamification and personalized learning experiences. AI tools enable dynamic lesson delivery, encouraging active participation and independent learning. It suggests that AI integration can be optimized to support differentiated instruction, catering to diverse learning needs.

To Analyze the Pedagogical Strategies and Instructional Adaptations Employed by Filipino Language Teachers in Response to AI-Driven Educational Innovations

The integration of AI-driven educational innovations has prompted Filipino language teachers to adapt their pedagogical strategies to balance technology with cultural and linguistic authenticity. Many educators employ a blended learning approach, combining AI-generated exercises for practice and reinforcement with traditional discussions that nurture critical thinking, cultural understanding, and more profound mastery of linguistic structures. While AI can enrich classroom activities, this method underscores that it cannot replace the essential human interaction required to convey Filipino cultural nuances. At the same time, teachers recognize the necessity of continuous professional development to harness AI's potential effectively. They actively participate in workshops, training, and personal experimentation with various tools, reflecting a growth mindset and a commitment to aligning technology with students' diverse learning needs. These adaptive practices highlight the evolving role of teachers as both facilitators of technology-enhanced learning and custodians of cultural knowledge, emphasizing the importance of institutional support in strengthening teacher capacity for AI integration.

Blended Learning Approach

"I combine AI-generated exercises with traditional discussions to ensure students develop digital and critical thinking skills."

"I use AI-powered tools for practice exercises, but I still rely on human interactions to teach Filipino cultural nuances and deeper linguistic structures."

Teachers adopt a blended learning approach, integrating AI for reinforcement and practice while maintaining traditional instructional methods for higher-order thinking and cultural instruction. This approach suggests that AI should be strategically embedded in language teaching without replacing essential human interaction.

Continuous Professional Development in AI Integration

"I actively attend training workshops to improve my ability to integrate AI into my language lessons effectively."

"Learning about AI in education is a continuous process. I experiment with different tools to see what works best for my students."

Teachers recognize the importance of ongoing professional development in AI integration. They actively seek opportunities to expand their digital literacy, reflecting a growth mindset toward technological adaptation. It suggests that institutional support and professional training programs are critical in helping teachers maximize AI's potential in Filipino language instruction.

Discussion

The findings of this study reveal that Filipino language educators generally perceive AI as a supportive tool, particularly in facilitating assessment and enhancing student engagement. However, they also express concerns regarding the accuracy of AI-generated content, especially concerning cultural and linguistic nuances specific to the Filipino language. One of the significant challenges identified is the digital divide, which affects technological accessibility and limits the full-scale adoption of AI tools in language instruction. Additionally, AI's limitations in accurately processing and contextualizing Filipino language structures further complicate its integration into teaching practices. Despite these challenges, educators recognize AI's potential to enhance student engagement through gamification and interactive exercises, providing new opportunities for differentiated instruction. To maximize the benefits of AI, teachers prefer a blended learning model that combines AI-driven tools with traditional instruction, ensuring a balance between digital learning, critical thinking, and cultural preservation. Furthermore, continuous professional development in AI integration is essential, as educators actively seek training and experiment with various AI-powered teaching strategies to refine their instructional approaches.

Conclusion

This study concludes that AI plays a significant yet complex role in Filipino language instruction. Educators recognize its value as a supportive tool for assessment and engagement, particularly in automating feedback and creating interactive learning experiences. However, concerns persist regarding content accuracy and cultural appropriateness, highlighting the need for AI systems to be more attuned to the linguistic and contextual intricacies of the Filipino language.

Challenges such as the digital divide, technological accessibility, and AI's limitations in handling Filipino linguistic structures continue to hinder widespread adoption. The disparity in access to AI tools, especially in rural and underprivileged areas, reinforces the need for equitable technological support and infrastructure development to ensure inclusive AI integration in language education. Despite these challenges, AI's ability to enhance student engagement through gamification and personalized learning experiences presents promising opportunities for language instruction. Filipino language educators acknowledge AI as a tool that can complement traditional teaching methods, rather than replace them. They advocate for a blended learning approach, integrating AI-driven exercises with conventional

pedagogical techniques to preserve the humanistic and cultural aspects of language learning. The study underscores the importance of continuous professional development in AI integration. Teachers actively seek training and explore AI-driven strategies to refine their teaching methods. Institutional support through capacity-building programs and AI literacy training is essential in empowering educators to maximize AI's potential while mitigating its limitations. Moving forward, further research is recommended to explore localized AI development that aligns with the unique demands of Filipino language instruction, ensuring that AI technologies remain culturally relevant, pedagogically effective, and widely accessible.

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