Teachers' Perception of the Use of AI Tools in EFL Classroom Sub-area School

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Abstract
This study explores the perceptions of English as a Foreign Language (EFL) teachers regarding the use of Artificial Intelligence (AI)-based tools in vocational and senior high schools in Samarinda, East Kalimantan. The rapid growth of AI in education presents both opportunities and challenges, particularly in language teaching. This qualitative research employs a case study approach involving seven English as a Foreign Language (EFL) teachers. Data were collected through semi-structured interviews and analyzed using a thematic analysis approach. The findings indicate that most teachers perceive AI as a supportive tool in instructional material development and administrative efficiency. However, they emphasize that AI cannot replace the human role in the teaching process. The teachers expressed concerns about students' overdependence on AI, ethical use, and the importance of adapting AI-generated content to suit learners' needs. They also highlighted the need for professional development, especially for senior educators, to ensure responsible and effective integration of AI in the classroom. This study contributes to the understanding of how AI is perceived in underrepresented educational contexts and underscores the need for balanced implementation strategies that combine pedagogical considerations with technological innovation. It also recommends continuous teacher training aligned with clear ethical guidelines so that AI truly enhances rather than diminishes the quality of language learning.

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Abstrak
Penelitian ini mengeksplorasi persepsi guru (EFL) terhadap penggunaan alat berbasis Kecerdasan Buatan (AI) di sekolah menengah kejuruan dan sekolah menengah atas di Samarinda, Kalimantan Timur. Pertumbuhan pesat AI dalam pendidikan menghadirkan peluang sekaligus tantangan, khususnya dalam pengajaran Bahasa. Penelitian kualitatif ini menggunakan pendekatan studi kasus dengan melibatkan tujuh guru EFL. Data dikumpulkan melalui wawancara semi-terstruktur dan dianalisis menggunakan analisis tematik. Temuan menunjukkan bahwa sebagian besar guru memandang AI sebagai alat bantu dalam pengembangan materi ajar dan efisiensi administrasi. Namun, mereka menekankan bahwa AI tidak dapat menggantikan peran manusia dalam proses pengajaran. Para guru mengungkapkan kekhawatiran terkait ketergantungan berlebihan siswa terhadap AI, penggunaan yang etis, serta pentingnya menyesuaikan konten yang dihasilkan AI agar sesuai dengan kebutuhan peserta didik. Guru juga menekankan pentingnya pengembangan profesional, khususnya bagi pendidik senior, guna memastikan integrasi AI yang bertanggung jawab dan efektif di dalam kelas. Studi ini memberikan kontribusi terhadap pemahaman tentang bagaimana AI dipersepsikan dalam konteks pendidikan yang kurang terwakili, serta menyoroti perlunya strategi implementasi seimbang dan menggabungkan pertimbangan pedagogis dengan inovasi teknologi. Penelitian ini juga merekomendasikan pelatihan guru yang berkelanjutan sesuai pedoman etika yang jelas agar AI benar-benar berfungsi untuk meningkatkan bukan menurunkan kualitas pembelajaran Bahasa.

I. INTRODUCTION

The rapid integration of artificial intelligence (AI) in education is transforming traditional teaching and learning methods. In the 21st century, educational practices have undergone significant changes, largely driven by technological advancements. AI-powered tools such as intelligent tutoring systems, adaptive learning platforms, and automated grading software enable personalized learning, provide real-time feedback, and support effective classroom management. By harnessing machine learning and natural language processing, these technologies increase student engagement and address diverse learning needs (Kritandani et al., 2024).

As technology becomes more deeply embedded in education, teachers are expected to understand and integrate its potential to enhance the teaching and learning experience (Dynarski et al., 2023). The emergence of AI in educational settings has sparked a range of mixed responses, from optimism to skepticism. This shift is particularly significant in the context of English as a Foreign Language (EFL) instruction. Although EFL pedagogy has traditionally relied on established methodologies, the integration of AI technologies such as conversational AI is beginning to reshape language learning by introducing new opportunities and challenges.

Teaching EFL presents several pedagogical challenges, such as managing varying levels of student proficiency, sustaining learner motivation, and providing individualized instruction. These issues are compounded by the diverse linguistic backgrounds of students and the limitations of traditional, one-size-fits-all teaching strategies (Pikhart, 2021). As a response, researchers have proposed innovative solutions, including the use of AI tools that offer adaptive and interactive learning experiences tailored to each student's level and learning pace (Sumakul et al., 2022).

AI tools hold the potential to address several pressing challenges in EFL instruction. Technologies such as speech recognition offer instant feedback on pronunciation and fluency, while chatbots and virtual assistants deliver real-time conversational practice. Adaptive learning systems personalize instruction by modifying content based on each learner's progress, thereby supporting differentiated learning (Cokyasar, 2021). In addition, automation of administrative tasks such as grading allows teachers to focus more on fostering creativity, engagement, and meaningful interaction in the classroom.

Despite these advantages, the integration of AI into EFL education also raises important ethical considerations. Issues such as algorithmic bias, data privacy, and over-reliance on technology have drawn concern from educators and scholars. Teachers need to implement AI tools responsibly, emphasizing transparency, fairness, and the protection of student data. According to (Sumakul et al., 2022), rather than replacing educators, AI should serve to augment the teacher's role, as human judgment remains critical in recognizing students' emotions, motivations, and individual learning needs.

While numerous studies have explored the affordances of AI in language education, limited research has examined how EFL teachers themselves perceive and experience the use of AI tools in their classrooms. This study aims to address that gap by investigating teachers' perspectives on the integration of AI in EFL instruction, focusing on both the perceived benefits and concerns, as well as the implications for their professional roles in an increasingly AI-driven educational environment.

Despite the growing integration of AI in language education, a significant research gap remains in EFL teachers' limited understanding and experience with such technologies. Many educators still express neutral or uncertain attitudes regarding the benefits and risks of AI, indicating a lack of both theoretical insight and practical readiness. This is echoed in the study (Dilzhan, 2024) While highlighting the potential advantages and challenges of using tools like ChatGPT in EFL classrooms, it also emphasizes the need for further investigation into long-term impacts, the design of effective teacher training programs, and the formulation of ethical guidelines for responsible AI use in education. Furthermore, there is a call for more comprehensive research that examines the influence of AI on teaching, learning, and assessment, considering diverse educational settings, student demographics, and both teachers' and students' perspectives, particularly concerning equity and ethical concerns.

II. METHOD

1. Design

   This study employs a qualitative research approach to explore EFL teachers' perceptions of the benefits and challenges of using AI tools in the classroom and to identify the factors influencing the acceptance and adoption of these technologies. The research is framed within a case study design**,** which allows for an in-depth understanding of the phenomenon within its real-life context, particularly focusing on EFL teachers in selected sub-area schools.

2. Participant

   Participants were purposively selected from vocational and senior high schools that have introduced or experimented with AI-supported language learning tools. A total of 7 English teachers were invited to participate, representing diverse backgrounds in teaching experience and technological exposure. This purposive sampling strategy ensures the inclusion of teachers with varying levels of

familiarity and engagement with AI tools, which is essential for capturing a wide range of perceptions and experiences.

3. Data Collection

Data collection was conducted through semi-structured interviews. These interviews are designed to elicit rich, detailed responses regarding teachers' beliefs, experiences, attitudes, and concerns related to AI integration in EFL classrooms.

The interview protocol includes open-ended questions aligned with the two research questions, such as perceived benefits and obstacles, personal and institutional readiness, ethical considerations, and the influence of training and resources. All interviews were conducted either in person or virtually, depending on participant availability, and will be audio-recorded with consent for transcription and analysis.

4. Data Analysis

Data analysis followed a thematic analysis approach, as outlined by Braun and Clarke (2006). The interview transcripts were coded manually and systematically to identify key themes and patterns. These themes were categorized according to the research questions, allowing the researcher to interpret the findings about existing literature and theoretical frameworks on technology adoption and pedagogical change.

To enhance credibility, member checking was used by sharing summaries of findings with participants for validation, and triangulation was conducted through cross-referencing emerging themes with relevant documents or observations, if applicable.

This methodology is designed to provide nuanced insights into EFL teachers' lived experiences and professional judgments regarding AI in the language learning context. The qualitative design enables the researcher to capture the complexity and variability of teacher perspectives, which are often shaped by contextual factors such as school policies, access to infrastructure, and personal beliefs about teaching and technology.

5. Instrument

The instrument used is an interview with open-ended questions. The instrument is adapted based on the previous journal article by (Moura & Carvalho, 2024). It takes the form of a structured interview guide designed for teachers, comprising five main sections that each focus on a specific aspect aligned with the research objectives. The guide also includes respondent information such as name, gender, age, experience in teaching English, and experience in using AI in learning. This component aims to understand the context of teachers' backgrounds that may influence their perceptions of AI.

The interview data were manually analyzed by the researcher using thematic analysis. To enhance the reliability of the coding process, a second coder was involved, and intercoder agreement was discussed to ensure consistency in the interpretation of emerging themes. From an ethical standpoint, all participants provided informed consent, including explicit permission for audio recording. Institutional ethical approval was obtained prior to data collection. To maintain confidentiality, participant identities were anonymized, and all data were stored securely to prevent access by unauthorized parties.

This study adopts a case study approach to gain an in-depth understanding of teachers' perceptions of AI integration in English as a Foreign Language (EFL) classrooms. A case study design was considered appropriate because it enables the exploration of complex, context-dependent phenomena in real educational settings.

III. RESULT AND DISCUSSION

A. Result

This research was conducted in four schools, SMAN 1 Samarinda, SMAN 3 Samarinda, SMKN 2 Samarinda, and SMKN 17 Samarinda, in East Kalimantan. The research subjects consisted of several English teachers from these schools who have experience using AI-based technology in the learning process, either explicitly (e.g., using ChatGPT or Google Assistant) or implicitly (using AI features in learning applications). The participants in this study have backgrounds in English education, holding Bachelor's and Master's degrees. Their teaching experience ranges from 3 to 30 years. Their experience with using AI also varies; some are just starting to explore it, while others use it regularly in their teaching. The paragraph below will explain each participant's answer based on the result of the question from the researcher.

Table 1. Thematic Findings

Thematic Area	General Patterns	Participa Ilustrations
Attitudes toward AI	Most teachers view AI as a useful supplementary tool, but emphasize the need for critical and selective use.	GZ: "AI can assist, but content must be verified." LK: "AI is helpful, but its answers require validation."
Potential for AI to Replace Teachers	All participants reject the notion that AI can replace teachers, particularly regarding affective and character-building roles.	ID: "Teaching involves character-building and emotional connection." AD: "AI cannot understand students personally."
Ethics & Fairness in Use	Concerns center on equitable access, over-reliance by students, and the need for content filtering.	SA: "Students tend to rely excessively on AI." DP: "AI tools must be safe and fair for all students."
Teacher Training	All teachers highlight the importance of ongoing AI training, especially for senior educators.	ZK: "Teachers need basic AI training." LK: "Peer support is vital for adapting to technological change."

1. Attitudes toward AI

Most participants regard AI as a beneficial adjunct to teaching, particularly for administrative efficiency and as a resource for instructional materials. However, they consistently stress the importance of critical engagement and not relying on AI-generated content uncritically.

"AI can assist, but content must be verified and should not serve as the primary source," (GZ).

"AI is helpful as a reference, but its answers must be cross-checked, as they may diverge from textbook information," (LK).

Senior teachers, such as ID, express greater skepticism, associating AI use with diminished creativity and independent thinking among both teachers and students. The prevailing pattern is a conditional acceptance of AI: teachers are open to leveraging AI as a support tool, provided its use is balanced and thoughtfully integrated.

2. Potential for AI to Replace Teachers

All participants categorically reject the idea that AI could supplant teachers, especially in relation to character education, emotional support, and personalized student understanding.

"Teaching is not merely about content delivery; it encompasses character-building, discipline, and emotional connection, none of which can be replicated by machines," (ID).

"AI cannot build emotional connections or understand students personally as teachers do," (AD).

Teachers underline the irreplaceable role of educators in providing moral and social guidance. The consensus is that while AI can support cognitive aspects of learning, the affective and social dimensions remain the exclusive domain of human teachers.

3. Ethics and Fairness in Use

Participants raise ethical concerns regarding the use of AI, including issues of equitable access, potential student dependency, and the necessity of content filtering to ensure student safety.

"Students tend to rely excessively on AI for quick answers, which reduces their independent learning effort," (SA).

"AI tools must be used ethically and fairly, with content filters to protect students from inappropriate information," (DP).

There is a shared apprehension that unregulated AI use could exacerbate educational inequality and undermine the development of essential student skills.

4. Teacher Training

All informants underscore the necessity of ongoing professional development in AI, particularly for senior teachers or those less familiar with technology.

"Teachers need basic AI training, especially those unfamiliar with the technology," (ZK).

"Peer support systems are crucial for teachers to adapt to technological changes," (LK).

Several schools have initiated training through digital teaching module competitions and collaborative teacher communities. The general trend is a recognized need for continuous training

and peer collaboration to ensure responsible and effective AI integration.

5. Synthesis

The overarching pattern is a conditional acceptance of AI as a supportive tool; with unanimous rejection of the notion that AI could replace teachers in the affective and social domains of education. Teachers emphasize the necessity of ethical, equitable, and regulated AI use, alongside sustained professional development.

Notable differences emerge between younger and senior teachers. Younger teachers (e.g., AD, ZK) tend to be more open and adaptive to AI integration, while still recognizing the risks of student over-reliance. Senior teachers (e.g., ID, SA) are more cautious, emphasizing concerns about creativity, independent thinking, and equity. Nevertheless, both groups agree on the irreplaceable role of teachers and the importance of training and collaboration.

No participants deviate significantly from these general patterns; all agree that AI cannot fully supplant the multifaceted role of teachers and that its use must be accompanied by oversight, training, and ethical considerations.

B. Discussion

The study reveals diverse perspectives among EFL teachers in Samarinda regarding AI integration, influenced by their experience, technological familiarity, and educational context. While AI is viewed as a supportive tool, it is not considered a substitute for human teachers, who provide irreplaceable emotional, moral, and social guidance, a view consistent with prior research (Dilzhan, 2024; Mohamed, 2023), emphasize that AI serves as a supportive tool in English language learning, enhancing skills and learning experiences, but does not replace the role of human teachers. Moreover, the COVID-19 pandemic underscored AI's limitations, as teachers noted declines in student discipline and engagement during remote learning.

Teachers like LK and DP utilize AI tools (e.g., ChatGPT, Google Assistant) for material preparation but emphasize the need to verify AI content's accuracy and contextual relevance, echoing concerns about AI's limitations in adapting to students' proficiency. Concerns about student overreliance on AI for assignments, potentially undermining critical thinking, were raised by SA and ZK, aligning with (Mohamed, 2023) warnings about excessive AI use.

Most teachers advocate for the ethical use of AI and equitable access, underscoring the imperative to accommodate the diverse needs of students, particularly in vocational schools where disparities in technological access are prevalent. This perspective is corroborated by (Dilzhan, 2024) and (Jiang, 2022), who emphasize that effective AI integration is contingent upon comprehensive and targeted teacher training. Furthermore, they highlight that senior educators, who generally possess lower levels of technological proficiency, derive considerable benefit from peer-led workshops and structured digital training modules.

This study enriches existing literature by providing a localized perspective from a semi-urban Indonesian context, emphasizing that AI integration requires pedagogical judgment, ethical vigilance, and institutional support. AI can enhance teaching efficiency and content generation but must be managed to prevent dependency and preserve the teacher's central role. Future research should examine student perspectives, long-term learning impacts, and effective teacher training for AI use.

IV. CONCLUSION AND SUGGESTION

A. Conclusion

This study explored the perceptions and experiences of EFL teachers in Samarinda regarding the integration of Artificial Intelligence (AI) in English language teaching. The findings indicate a shared awareness among teachers that AI, though valuable for both pedagogical and administrative support, is not perceived as a substitute for human educators. Across a spectrum of teaching experience from novice to veteran, AI is consistently regarded as a tool that can enhance instructional and operational efficiency but lacks the emotional intelligence, ethical discernment, and interpersonal depth essential for holistic student development.

Teachers acknowledged that AI applications such as ChatGPT and Google Assistant facilitate material generation and provide rapid references, particularly under limited instructional time frames. Nevertheless, concerns persist regarding the accuracy, appropriateness, and potential

misuse of AI-generated content. The majority emphasized the critical importance of validating AI outputs and adapting them to learners' proficiency levels and curricular standards. Additionally, several participants expressed apprehension about students' growing dependence on AI for task completion, cautioning that such reliance may undermine critical thinking, creativity, and autonomous learning skills.

Ethical considerations emerged as a recurrent theme throughout the interviews. Teachers stressed the necessity of responsible AI integration that safeguards student privacy, ensures fairness, and prevents digital dependency. In vocational school contexts, where students' technological readiness and access vary widely, adaptive and inclusive implementation strategies are imperative. Equitable access to AI tools and differentiated usage approaches were identified as crucial measures to mitigate educational disparities.

A key implication of this study is the urgent need for institutional investment in teacher digital literacy programs, particularly targeting senior educators, through sustained and context-responsive professional development initiatives. Peer mentoring, communities of practice, and school-led digital innovation were identified as effective mechanisms to support teacher learning and technology adoption.

Ultimately, this study contributes a localized understanding of how EFL educators navigate the promises and pitfalls of AI, underscoring the importance of human-centered, ethically grounded, and context-sensitive approaches in future technology integration strategies.

B. Suggestion

In light of these findings, several actionable recommendations are proposed to optimize the responsible and impactful incorporation of AI technologies within EFL instructional settings.

First, educational institutions should prioritize comprehensive teacher training through continuous and differentiated professional development initiatives. These initiatives could include peer mentoring programs, interactive online modules, and hands-on workshops focused on AI tools; all tailored to varying levels of digital proficiency. Such programs must explicitly address the ethical deployment of AI, adaptive pedagogical strategies, and critical appraisal skills to evaluate AI-generated content effectively.

Second, schools are urged to formulate and enforce explicit policies and ethical frameworks that safeguard student data privacy, ensure the reliability of AI-generated materials, and uphold academic integrity standards. These guidelines should be operationalized through transparent protocols and regular audits to foster trust and accountability.

Third, a hybrid pedagogical model is recommended, integrating traditional instructional methods with AI-enhanced resources to preserve learner-centered and socially interactive environments. For instance, AI can be employed to personalize language exercises while teachers facilitate collaborative discussions and communicative activities, thus maintaining the essential human element in language acquisition.

Moreover, cultivating AI literacy among students is imperative. Educators should design assignments that stimulate higher-order cognitive processes such as analysis, synthesis, and creativity thereby encouraging judicious and active engagement with AI tools rather than passive dependence.

Importantly, educational policymakers and authorities must play a pivotal role by allocating dedicated funding and establishing comprehensive national frameworks that guide equitable AI integration across diverse educational contexts. This systemic support is vital to ensure consistency, scalability, and inclusivity in AI adoption.

Finally, future research should investigate learners' attitudes, behaviors, and experiences concerning AI use in EFL settings, alongside longitudinal studies assessing the impact of AI on language proficiency development and learner autonomy.

While AI presents promising opportunities as an educational adjunct, its deployment demands a nuanced approach that is ethically vigilant, pedagogically nuanced, and contextually adaptable. Ultimately, educators remain the cornerstone of effective language instruction, with AI serving as a strategic enabler that enriches but never replaces the invaluable human dimensions of teaching and learning. Embracing this balanced synergy will be essential to unlocking AI's transformative potential in language education.

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