Journal Corner of Education, Linguistics, and Literature
Vol. 4 No. 001 (December, 2024), pp. 765-773
https://doi.org/10.54012/jcell.v4i001.507

Integrating Artificial Intelligence in EFL Classrooms: Opportunities and Challenges for Indonesian Teachers

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Received: November 7, 2024
Revised: November 23, 2024
Accepted: December 6, 2024
Published: December 20, 2024

ABSTRACT

This study examines how English as a Foreign Language (EFL) teachers in public senior high schools in Ogan Komering Ulu Timur (East OKU), South Sumatera, Indonesia, perceive and use artificial intelligence (AI) tools in their classrooms. Using a qualitative descriptive design, data were collected through semi-structured interviews, classroom observations, and document analysis with six EFL teachers. The findings reveal that the teachers generally have positive attitudes toward AI, particularly because of its ability to provide immediate feedback, encourage learner autonomy, and increase student motivation. However, practical implementation is challenged by limited infrastructure, including unstable internet connectivity and inadequate school facilities, as well as gaps in pedagogical competence and concerns over ethical misuse by students. A strong need for localized, curriculum-linked professional development programs tailored to AI tools was also expressed by teachers. The study found that integrating AI effectively in Indonesian EFL contexts requires more than just easy access to technology. It also needs well-designed training, investment from schools and universities, and guidelines to ensure ethical use of AI. The research proffers pragmatic insights for teachers, policymakers, and curriculum designers seeking to ameliorate the discrepancy between AI's potential and its actuality in language education.

Keywords: *Artificial Intelligence; EFL teachers; qualitative study; digital pedagogy; Indonesia.*

INTRODUCTION

Technological developments in the era of the industrial revolution 4.0 affect everything, including the education sector (Mulkiyah, 2023). In recent years, the field of English as a Second Language (ESL) instruction has undergone a significant transformation due to the rapid advancement of digital technology. One of the most talked-about innovations is artificial intelligence (AI), which is slowly but surely making its way into classrooms around the world. AI-powered tools such as ChatGPT, Duolingo's adaptive learning engine, Grammarly, and text-to-speech applications offer students new, interactive, and effective ways to learn English independently. These tools provide personalized feedback and instruction based on each student's needs. They also make it possible to do things in the classroom that we could not do before (Chen et al., 2020; Zawacki-Richter et al., 2019).

The potential of these AI technologies in formal education, especially in the teaching of English, is beginning to be explored by Indonesia, like many other developing countries. The country has always had a problem with students from different areas speaking English at different levels. This is especially true between students in cities and students in rural areas (Sulistiyo, 2016). While English learning has been supported by government programs through curriculum reforms and teacher training, challenges are still faced by many teachers in delivering engaging and student-centered instruction. The integration of AI into EFL classrooms is regarded as a potential solution to address these challenges, offering support to teachers, enhancing student motivation, and facilitating more customized learning experiences (Kukulska-Hulme, 2020).

However, upon further analysis, a more nuanced situation emerges. While there is an increasing global prevalence of AI tools, numerous Indonesian EFL teachers are hesitant to adopt these technologies in a meaningful manner within their daily teaching practice due to a lack of clarity regarding their integration. While some individuals exhibit enthusiasm, they often lack the requisite training. Conversely, others have voiced skepticism, articulating concerns regarding issues such as accuracy, reliance on technology, and the potential for AI to supplant human teachers (Luckin et al., 2016). In addition, infrastructural impediments, including constrained internet access, inadequate digital literacy, and insufficient institutional backing, persist in impeding the efficacious implementation of e-government, particularly within less developed regions (Widodo, 2017; Rahardjo & Puspitasari, 2021).

Notwithstanding the proliferation of AI in the educational sector, there is a paucity of research that examines how EFL instructors in Indonesia are responding to the advent of this technological transformation. A substantial proportion of extant research endeavors have been directed towards examining students' utilization of digital learning platforms or their overarching dispositions towards technology. (Pratama & Sopandi, 2020). A dearth of research has examined teachers' perspectives, particularly regarding their understanding of AI, the challenges they encounter when utilizing it, and the support they require to utilize it effectively. To ensure the success of efforts to integrate artificial intelligence (AI) into the classroom, it is essential to consider the perspective of teachers. A thorough understanding of the teachers' perspective is necessary to optimize the implementation of AI in educational settings. (Kessler, 2018)

The present study endeavors to address this lacuna by directing its attention toward a particular demographic of English as a Foreign Language (EFL) pedagogues in Indonesia, namely those who utilize AI tools in their instructional practice. To address this question more precisely, it seeks to provide answers to three specific research inquiries. The objective of this study was to address the following research inquiries: (1) What are Indonesian EFL teachers' perceptions concerning the implementation of artificial intelligence (AI) in the classroom?; (2) What challenges and opportunities do they encounter when integrating AI into their teaching practices?;

and (3) What kind of support, training, or resources do they believe would help them utilize AI tools more effectively?

Furthermore, the present study endeavors to illuminate this phenomenon by exploring the influence of AI on, and in some cases, the hindrance to, the landscape of English language education in Indonesia. The text continues by providing specific, practical guidance for teacher development programs, policymakers, and educational institutions that are interested in incorporating artificial intelligence as a key component of their long-term strategy for enhancing English language education at the national level.

METHOD

This study adopted a qualitative descriptive approach with the purpose of investigating how Indonesian English as a Foreign Language (EFL) teachers perceive and experience the integration of Artificial Intelligence (AI) tools in their teaching practice. The qualitative design was regarded as the optimal approach, given its ability to facilitate an in-depth examination of the multifaceted aspects surrounding teachers' beliefs, the challenges they encounter, and the unique realities of their classrooms. Instead of emphasizing quantifiable outcomes, this study endeavored to shed light on the social and pedagogical dimensions of AI usage in the classroom, as perceived by the participants themselves.

This research was conducted in three public senior high schools located in Ogan Komering Ulu Timur (East OKU), South Sumatera, Indonesia. These schools were deliberately selected to represent a range of semi-urban and rural contexts, in which disparities in technological infrastructure and access to digital tools are pronounced. The participants in this study comprised six English teachers, four women and two men, whose teaching experience ranged from five to twenty years. A general degree of acquaintance with digital teaching technologies was demonstrated by all participants. However, participants' exposure to AI-based tools exhibited considerable variation. The participants were selected by the researchers through the use of purposive sampling, a methodical process of choosing individuals based on specific criteria. The criteria for participation included two fundamental factors: the participants' willingness to engage with the topic of Artificial Intelligence (AI) in English as a Foreign Language (EFL) instruction, as well as their availability to share their thoughts on the matter.

The data for this study was obtained through a combination of methods. These methods included semi-structured interviews, classroom observation, and a thorough analysis of relevant documents. Conducted as a component of a more extensive investigative framework, the interviews constituted the primary data source. The investigative team initially sought to administer these interviews in a face-to-face manner; however, given the logistical challenges associated with this approach, the investigators also utilized virtual, video conferencing platforms. The interviews were conducted with a duration of approximately 45 to 60 minutes and encompassed several salient domains, including the subjects' comprehension of artificial intelligence in educational settings, the integration of AI instruments within their instructional praxis,

the perceived benefits and drawbacks of such integration, and the forms of assistance they considered indispensable for enhancing the efficacy of AI implementation. To gain further insight into actual classroom practice, the researcher conducted a limited number of observations in a selection of classrooms and reviewed relevant teaching materials, including but not limited to lesson plans, student worksheets, and digital content used by the teachers. The integration of supplementary data sources was a methodical process aimed at enhancing the study's credibility by leveraging diverse perspectives.

The collected data were then subjected to thematic analysis, employing the model proposed by Braun and Clarke (2006). The transcription of the interviews in their entirety was conducted, and the data was subsequently subjected to inductive coding. The identification of patterns was undertaken, and these patterns were then organized into emergent themes. The analysis focused on recurring concepts related to the opportunities and challenges of AI in EFL instruction, as well as teacher needs and institutional support. Throughout the research process, ethical principles were meticulously upheld. Informed consent was obtained from all participants, and pseudonyms were used to ensure confidentiality. The participants were informed that they were at liberty to wit.

FINDINGS AND DISCUSSION

The present study was conducted to investigate the perceptions, utilization, and challenges encountered by Indonesian EFL instructors in East OKU with regard to the integration of Artificial Intelligence (AI) tools within their instructional practice. The inquiry was driven by three fundamental research questions: A primary research question is thus: What are teachers' perceptions of artificial intelligence in the context of language education? Secondly, it is imperative to ascertain what opportunities and challenges the subjects in question encounter during this process. Thirdly, in order to facilitate effective integration, it is crucial to determine the forms of support to which they are in need of. The subsequent data analysis yielded five interconnected thematic areas, the examination of which thoroughly addresses the previously delineated inquiries.

1. The following investigation will examine the positive perceptions of AI tools.

The predominant sentiment within the pedagogical community is one of optimism concerning the potential of artificial intelligence to enhance the effectiveness of English for Foreign Language instruction. A survey was conducted, and the results indicated that a majority of the respondents, specifically five out of six, expressed favorable perceptions of this emerging technology's capacity to support and augment EFL pedagogy. A number of salient features were emphasized, including real-time feedback, opportunities for autonomous learning, and enhanced student engagement. It has been observed among teachers that tools such as Grammarly and ChatGPT possess the potential to function as a form of scaffolding for students grappling with challenges related to writing, grammar, or vocabulary. It was noted by a teacher that

the implementation of artificial intelligence has played a significant role in fostering heightened levels of self-assurance among the students. They endeavor to write more, recognizing that they can rely on the machine to assist them in revising their work."

This finding aligns with the extant literature emphasizing the capacity of AI to enhance learner autonomy and to deliver customized support (Chen et al., 2020). Nevertheless, the teaching profession acknowledges that AI is not capable of replacing the emotional and critical guidance imparted by human educators.

2. The subsequent section will address the technical and infrastructural barriers that have been identified.

All six participants reported the presence of significant technical barriers that hindered the implementation process. The aforementioned challenges included inadequate internet connectivity, insufficient school-owned digital devices, and reliance on personal mobile phones for instructional delivery purposes. The challenges previously mentioned were found to be exacerbated in rural areas due to two factors. Firstly, these areas are often subject to frequent power outages. Secondly, the accessibility of information technology support is often limited. These limitations in the educational infrastructure often resulted in teachers discontinuing or mitigating initiatives to incorporate instruments based on AI, particularly in the context of listening and speaking tasks that required reliable connections.

3. Pedagogical Concerns and Competency Gaps

Four teachers noted that, despite the availability of relevant tools, they lacked confidence in their ability to incorporate these tools into lesson plans in a meaningful way (Smith et al., 2023). The integration of AI was often limited to peripheral tasks such as grammar checking or translation, rather than achieving a more profound engagement with learning objectives. For instance, while some individuals employed tools such as Quillbot or ChatGPT to generate texts, they acknowledged a lack of certainty regarding the effective structuring of subsequent tasks that promote comprehension, critical thinking, or output production. One participant shared the following reflection: "We utilize it, but we are uncertain about our usage of it as teachers."

This phenomenon unveils a pedagogical gap, wherein teachers are employing tools without the backing of clear instructional frameworks, underscoring the necessity for targeted pedagogical training (Kessler, 2018).

4. Ethical and Academic Integrity Issues

A concern has been raised by three teachers regarding students' improper usage of artificial intelligence tools. This concern is particularly pertinent in the context of writing assignments. The report detailed cases in which students had submitted essays that had been entirely generated by AI, with no indication of revision or personal contribution. One teacher characterized this as "silent cheating," noting that the writing exhibited an excess of sophistication and was devoid of the typical errors typically

made by students. This phenomenon resonates with the expanding global discourse surrounding the discord between AI utilization and academic integrity (Luckin et al., 2016; Zawacki-Richter et al., 2019).

Teachers placed significant emphasis on the cultivation of students' critical digital literacy, with the objective being the edification of students on the appropriate utilization of AI, eschewing the tendency to rely on it in a thoughtless manner for solutions to academic problems.

5. There is a robust demand for contextualized training.

The six teachers articulated a pronounced aspiration for professional development that transcends the confines of generic ICT skills, instead emphasizing a specific focus on AI tools that are pertinent to EFL instruction. The existing body of literature indicates that the majority of workshops either possess an excessively technical character or are characterized by a generic nature, resulting in an absence of connection between tool features and curriculum-based lesson planning. As one participant articulated, there is a necessity for training to demonstrate the utilization of AI not merely as a technological apparatus, but also as an instrument that can be integrated into the achievement of pedagogical objectives.

Furthermore, the development of local peer-sharing communities was recommended, wherein teachers can engage in discourse on practical applications, successes, and challenges associated with artificial intelligence (AI) in real-time.

The following chart is intended to illustrate the frequency with which these themes were reported by teachers. The chart summarizes the number of teachers reporting each major issue.

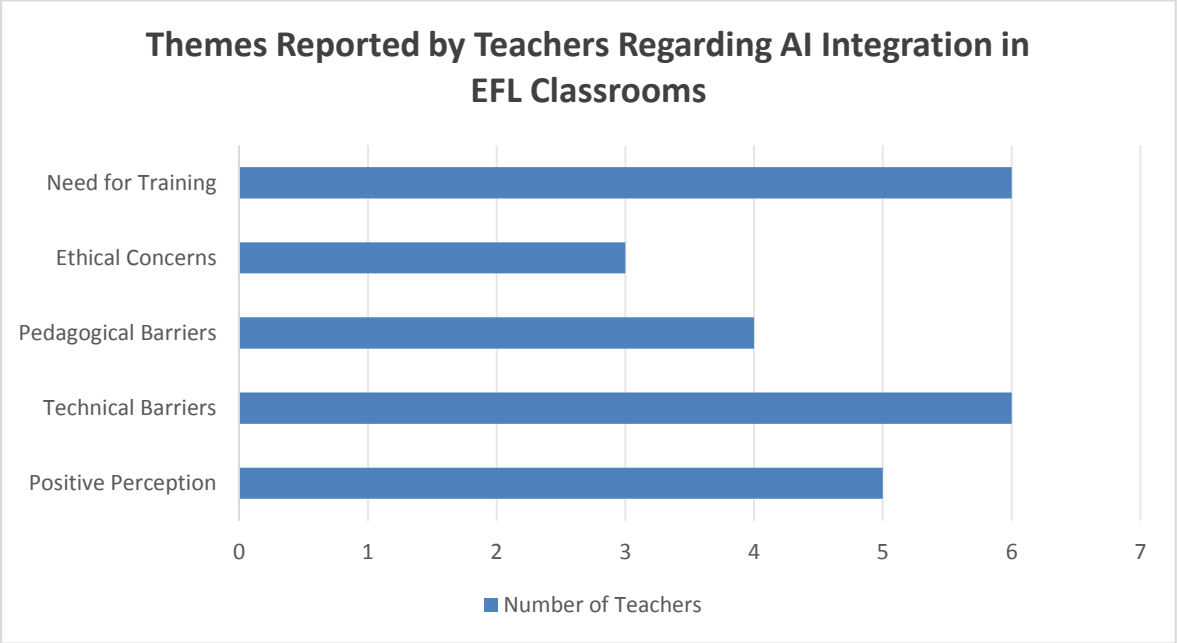

Figure 1. Themes Reported by Teachers Regarding AI Integration in EFL Classrooms

As illustrated by the chart, enthusiasm is evident, as indicated by strong positive perceptions. However, practical challenges persist. These challenges primarily consist of technical barriers and a deficiency in pedagogical preparedness, and thus represent the most dominant of concerns. It is therefore essential that these barriers be addressed if the integration of AI in Indonesian EFL classrooms is to progress from novelty to meaningful, sustained integration.

The findings of the present study are consistent with global research that advocates for comprehensive, teacher-centric methodologies for the integration of artificial intelligence within the educational sector. Kukulska-Hulme's (2020) argument posits that technological innovation alone is insufficient to effect transformation in the educational sector. The adoption of innovative technologies must be accompanied by curriculum alignment, the provision of support for teaching professionals, and the cultivation of critical digital literacy skills. In the context of Indonesia, these efforts must be locally grounded, responsive to disparities among school regions, and designed in collaboration with teachers themselves.

The study also calls into question the notion that resistance to AI is rooted in technophobia. In contrast, the teachers in this study demonstrated a willingness to engage in experimental approaches. The absence of these elements, namely infrastructure, training, and a clear pedagogical direction, is not indicative of a lack of interest.

CONCLUSION

This study examined the perceptions, experiences, and challenges of Indonesian EFL (English as a Foreign Language) teachers in integrating artificial intelligence (AI) into English language instruction. The study focused on senior high schools in East OKU, South Sumatera. The findings indicate that while teachers generally possess a favorable disposition toward AI and acknowledge its capacity to augment language instruction, their endeavors are impeded by infrastructural constraints, deficiencies in digital pedagogical expertise, and ethically charged concerns regarding student misuse of the technology.

Teachers have reported a positive sentiment regarding AI's capacity to offer immediate feedback, customize learning experiences, and enhance student motivation. Nonetheless, the incorporation of AI instrumentation is characterized by its sporadic nature and frequent reliance on individual teacher initiative rather than institutional strategy. The most significant barriers to effective implementation of these measures are the limited availability of reliable internet, the scarcity of adequate school resources, and the dearth of context-specific professional development. Furthermore, teachers underscored the necessity for explicit ethical guidelines and frameworks to ensure judicious utilization of AI tools by students.

These findings emphasize that the future of AI in EFL education in Indonesia is contingent not solely on technological advancement, but also on meticulous planning, equitable infrastructure, and ongoing teacher development. To that end, it is incumbent upon institutions and policymakers to adopt a holistic approach to this

matter. A holistic approach is one that empowers teachers as active agents in technology integration, addresses their real-world constraints, and promotes the use of AI with a proven record of pedagogical soundness and ethical responsibility.

In pursuit of further advancement in this field, subsequent research endeavors should place a premium on expanding the sample size through a comprehensive investigation encompassing multiple geographical areas and the integration of both quantitative and qualitative methodologies. This undertaking is expected to engender the cultivation of a more widely applicable understanding. Additionally, longitudinal studies may elucidate the evolution of teacher beliefs and practices as artificial intelligence (AI) tools become increasingly prevalent in Indonesian educational settings.

ACKNOWLEDGMENTS

The author wishes to extend profound gratitude to the English teachers at public senior high schools in East OKU, South Sumatera, who selflessly devoted their time, experiences, and insights to the research process. This research did not receive any specific grants from any funding agencies in the public, commercial, or not-for-profit sectors. However, it was supported by the author's institutional research program and professional development initiative.

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