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Integrating Artificial Intelligence (AI) into EFL in Higher Education: Challenges and Opportunities for Indonesian Teachers and Students

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ABSTRACT

Artificial intelligence (AI) is increasingly embedded in English as a Foreign Language (EFL) learning, offering both pedagogical opportunities and challenges in higher education. Understanding how teachers and students employ AI platforms is essential to optimize their benefits while addressing potential risks. This study employed a mixed-methods approach at a private university in Makassar. Quantitative data were collected through surveys involving 70 students and 35 English teachers, while qualitative insights were obtained from in-depth interviews with 30 students and 15 teachers. Data triangulation ensured reliability across survey and interview findings. Survey results showed differences in AI platform usage between teachers and students. Teachers primarily used QuillBot for paraphrasing, Turnitin for plagiarism detection, ChatGPT for chatbots, and Hello English for English-based learning. Students favored HIX.AI for paraphrasing, GPTZero for plagiarism, DeepSeek for chatbot interaction, and ELSA for English practice. Both groups frequently used DeepL as a translation tool. Interview data revealed challenges for teachers, including balancing facilitator roles with AI use, limited platform updates, accessibility barriers, and high costs of premium versions. Students' challenges included overreliance on AI and limited access due to paid subscriptions. The findings highlight both opportunities and constraints in AI-assisted EFL learning. While AI enhances personalization and efficiency, it risks dependency and inequity in access. The study underscores the need for digital literacy training for teachers, institutional support for equitable access, and the development of adaptive AI-based learning models tailored to local contexts.

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1. INTRODUCTION

Technology has undergone a significant transformation in the field of education due to the prevalence of Information and Communication Technologies (Elmi, Ambiyar, Huda, & Novaliendry,

2024; Upadhayaya, 2023). The burgeoning rise of information and communication technologies throughout time requires current and relevant data, highlighting the importance of utilizing and analyzing big databases (Bhutoria, 2022). Big data applications possess significant potential to generate valuable insights from datasets, facilitating the comprehension of students' learning paths, and improving the effectiveness of the educational process. Numerous studies have demonstrated that the integration of technology into the educational process does not merely enhance the quality of education but also contributes to the development of high-quality human capital. In addition, technology is essential in education, particularly in foreign language acquisition, as numerous technological instruments provide new opportunities for learners to practice and improve their language skills (Polakova & Klimova, 2023). Addition, Yi et al., (2024) stated that Technology serves as an expedient means to enhance foreign language acquisition for students. This indicates that educational technology is not merely a supporting tool but also transforms perspectives on lessons and the learning process itself. Artificial intelligence (AI) is one of these transformational learning (Gafarurrozi et al., 2024; Ulfa, 2023).

Furthermore, artificial intelligence has emerged as a significant technological aspect that has recently garnered attention in the field of education, including in higher education. The use of artificial intelligence (AI) in education has become increasingly prevalent. The advent of artificial intelligence has profoundly transformed various sectors, and the field of education is no exception (Zang & Wang 2022; Zhu 2021). Artificial intelligence may transform the manner in which we acquire the English language. In Malaysia, the integration of AI technology is positive due to its dynamic characteristics and efficacy among teachers, while encountering numerous obstacles that lead to disadvantages linked with its use (Zulkarnain & Yunus, 2023) . In Vietnam, artificial intelligence (AI) technologies are advocated as useful tools for foreign language instruction because of their flexibility, interaction, and learner-centered approach; hence, AI increases students' spoken communication skills(Duong & Suppasetseree, 2024). As AI continues to make inroads into the educational landscape, its impact on teaching English has become a subject of growing interest and exploration (Ojha & Misra, 2023). In line with the Indonesian context, AI offers learners a chance to practice in low-pressure settings, enabling them to mitigate language anxiety while enhancing fluency and precision (Huda & Roistika, 2025). These qualities enable AI to be a transformative instrument in contemporary education, especially in language learning. One of the primary advantages of incorporating AI in English teaching is its potential to enhance the effectiveness and efficiency of instructional methods (Ling-hui, 2022). AI-powered tools can analyze student learning patterns, provide personalized feedback, and adapt lesson plans to cater to individual needs, thereby fostering a more engaging and tailored learning experience (NÇelik, 2023). AI-driven language also processing capabilities can facilitate natural language understanding, enabling interactive learning environments and intelligent tutoring systems that can engage students in dynamic and meaningful dialogues (Sajja & Kumar 2023).

The practical use of AI is varied and serves different purposes in learning English. In this study, researchers classified them into several categories based on their usage in learning. There are many categories of AI platform that can be utilized to support EFL teaching. First, the category of translation-based AI encompasses the provision of writing feedback through DeepL Translator, Bing AI, and Google Translate (Abdallah, 2025; Polakova & Klimova, 2023a; Zainurrahman & Rodliyah, 2024). Second, Paraphrasing-based AI involves verifying and correcting grammatical faults in writing such as Grammarly, Quillbot, and HIX.AI (Bakri et al., 2024; Galuh & Setiamunadi, 2023; Latifah et al., 2024) . Third, Plagiarism-based AI such as Turnitin, GPTZero, and Dupli Checker can be utilized to assess the originality of written contents (Liang, Yuksekgonul, Mao, Wu, & Zou, 2023; Nova & Utami, 2018) (Liang et al., 2023; Nova & Utami, 2018). Thus, Chatbot-powered AI allows swift and efficient execution of typical activities such as replying to questions, identifying specific phrases, discerning intents using context and machine learning, and providing personalized responses like ChatGPT, Gemini, and Deepseek (Ho, 2024; Kohnke et al., 2023; Nancy et al., 2024). The last categories, English-based AI concentrate on English language learning assistance aimed at promoting speaking, listening, reading,

writing, vocabulary, and pronunciation skills, as well as supporting practice for English language tests such as ELSA, Duolingo, Hello English, Character AI, Speechase, etc (Marlinda & Huda, 2024; Osmunda, Monny, Angelita, & Manurung, 2024; Suyadi, Oktariza, Efendi, Fitriani, & Nady, 2024)

Drawing on the fifth category of AI outlined earlier, the researchers conducted observations of EFL teachers and students in higher education. The findings revealed that EFL teachers demonstrated familiarity with only a limited range of AI platforms. Meanwhile, students expressed uncertainty regarding which AI tools are most effective for enhancing their English language proficiency. The study identified and categorized the AI platforms utilized by both teachers and students, followed by an analysis of the opportunities and challenges associated with their implementation at a private university in Makassar, South Sulawesi. These findings align with previous research, which highlighted that commonly used AI tools in English language teaching include Google Translate, English Able, Duolingo, ELSA Speak, and various chatbot applications. Such platforms support language learning through personalized environments, authentic simulations, and adaptive instruction tailored to individual learner needs and proficiency levels (Anggraini & Faisal, 2024). Similarly, Kristiawan et al. (2024) noted that AI tools enhance learner engagement, provide customized learning experiences, and contribute to the development of language competencies, particularly in speaking and writing. Nonetheless, several challenges remain, including limited accessibility, insufficient teacher preparedness, and ethical concerns related to data privacy and algorithmic bias. In the Indonesian context, Shofiah et al. (2023) emphasized that AI tools offer significant benefits for academic writing, such as improving writing skills, delivering personalized feedback, managing learning tasks, addressing multilingual and multicultural needs, fostering collaboration, and ensuring inclusive and accessible learning environments. In contrast, in Vietnam, AI tools are widely used by students for all four language skills—listening, speaking, reading, and writing—with a high frequency of use and a clear awareness among learners of both the benefits and limitations of these technologies (Quyet, Minh, & Anh, 2024).

Despite the abundance of studies on challenges and opportunities in using AI, the majority focus on the viewpoints of teachers and students across various research efforts. The research problem concerns on the AI platform employed by both of EFL teachers and students, the opportunities of AI utilization, and the challenges encountered by EFL teachers and students in leveraging AI within higher education. This research aims to investigate the AI platforms predominantly used by EFL teachers and students across various categories, as well as the opportunities and challenges associated with AI usage in higher education. The novelty of this research lies in its exploration of diverse AI platforms, with a particular focus on how EFL teachers and students utilize AI to support English language learning, despite the challenges they still face. This research provides a new perspective on how the use of numerous AI platforms provides specific opportunities and challenges in English language learning.

2. METHODS

This research is an exploratory study that employs both qualitative and quantitative approaches to examine the challenges and opportunities encountered by EFL teachers and students in the use of artificial intelligence. The quantitative data gathered by the survey; this instrument is distributed via a link to Google Forms. This study constructed a question and statement instrument based on indications as a tool for determining the predominant AI platform used based on categories. Researchers sent the link to teachers and learners via email, as well as personal WhatsApp accounts for pupils and teachers. Surveys are used to learn about facts and realities in the field by allowing more participants to express their thoughts (Hansen & Tummers, 2020). The research instrument was created on Google to help researchers gather information from sources by organizing data into bar, line, and circle diagrams (Degner et.al, 2022). By sharing this Google link, it is intended that the resource person will be able to react objectively and without being pressured by others. The researchers selected a total of 70 students and 35 lecturers as representatives, as indicated by the results of the survey. The way to validate a

survey is through content validity checked by several experts in the field of English and technology. The researchers provide input on the appropriateness and completeness of the questions in the survey. While how to validate an interview is done through a trial with several respondents to see whether the questions submitted can obtain the information needed and whether the respondents can understand the questions well.

The qualitative data were gathered in accordance with Braun and Clarke's procedures for thematic analysis. The thematic analysis proceeded through several stages in this study follows, the initial of which was the collecting process, which began with the collection of survey and interview data. This data then serves as the basis for identifying themes that develop in the setting of the study. Second, the coding process involves identifying ideas (familiar data). Then, assigning codes to text fragments representing obstacles and opportunities. Codes relating to features of challenges and opportunities are classified into more detailed categories. After that, the collected codes are arranged into larger, more significant categories. Third, researchers combine data from surveys and interviews to get a more complete data. The questions were specifically designed to gather information related to prior responses on the questionnaire and to elicit further opinions from each participant, as the objective of the interview was to investigate each participant's viewpoints regarding the challenges and opportunities associated with the use of artificial intelligence. Researchers conducted semi-interviews with 30 students and 15 English teachers employed at private universities in Makassar to gather data. The eligibility criteria for research participants are met by teachers who employ AI to revise and verify the originality of students' assignments. The analytical framework used, TPACK, focuses more on technological, pedagogical, and knowledge (TPK). The use of technology, in this case the use of AI in learning, to achieve the objectives of teaching and understanding English by teachers and students. Conversely, students utilized artificial intelligence to obtain learning resources and consistently employed the AI platform to enhance their English proficiency.

Table 1. Instrument Grid for Predominantly AI used by EFL teachers and students

Categories	Purposes	Items
Translation-based AI	To convert text into another language	Google Translate, DeepL, Reservo
Paraphrasing-based AI	To verify the accuracy of spelling, grammar, and related elements.	Grammarly, Quilbot, HIX.AI
Plagiarism-based AI	To assess the originality of work and to assist in discovering references for concepts or accessing open content materials.	Turnitin, GPTZero, Dupli Checker
Chatbot-powered AI	to assist in discovering references for concepts or accessing open content materials.	ChatGPT, Gemini, Deepseek
English-based AI	To enhance English skills and sub-competencies, including listening, reading, speaking, writing, pronunciation, and vocabulary.	ELSA, Duolingo, Hello English

3. FINDINGS AND DISCUSSION

3.1 The most dominant AI applied by EFL teachers and students in learning English

In this study, a total of 35 EFL teachers and 70 students were surveyed to examine the categories of AI platforms used in English language learning. The AI tools reported were classified into five categories: translation-based AI, paraphrasing-based AI, plagiarism detection AI, chatbot-powered AI, and English language-specific AI, as presented in Tables 2 and 3. Table 2 summarizes the survey data collected via a Google Forms questionnaire completed by 35 EFL teachers who actively integrate AI platforms into their English teaching practices. The following section provides a detailed explanation of the data concerning the use of AI platforms by these teachers.

Table 2. Categories of AI Tools Used by EFL Teachers and the Number of Users for Each Tool

No.	AI Tools Categories	Number of Users
1.	**Translation-based AI**	
	DeepL	18
	Google Translate	9
	Reverso	8
2.	**Paraphrasing-based AI**	
	Quilbott	20
	Grammarly	13
	HIX.AI	2
3.	**Plagiarism-based AI**	
	Turnitin	23
	GPTZero	10
	DupliChecker	2
4.	**Chatbot-Powered AI**	
	ChatGPT	16
	Gemini	15
	Deepseek	4
5.	**English-based AI**	
	Hello English	15
	ELSA	10
	Duolingo	10

Table 1, as mentioned, showed that 35 EFL teachers utilized various AI platforms. Initially, in the translation-based AI category, teachers utilize Google Translate, DeepL, and Reverso. Nonetheless, the predominant tool utilized for learning is DeepL, with 18 users. Secondly, in the paraphrasing-based AI category, teachers primarily utilize QuillBot (20 users) over Grammarly (13 users) and HIX.AI (2 users). Similar with some studies, paraphrasing-based AI platforms such as QuillBot are more widely used by teachers in the context of material creation (Ngoc & Nhu, 2024; Xuyen, 2023). Third, teachers utilize plagiarism-based AI such as Turnitin, GPTZero, and DupliChecker. Among the AI platforms, Turnitin is the most widely utilized, with 23 users. In line with Zhang & Lu (2021) who showed that teachers prefer tools to detect plagiarism such as Turnitin. Moreover, the Chatbot-Powered AI category, teachers mostly utilize ChatGPT (16 users), followed by Gemini (15 users) and Deepseek (4 users). Mosaiyebzadeh et al., (2023) shows that the use of ChatGPT in learning is more often used by teachers to support discussion and interaction. In the English-based AI category, teachers utilize ELSA, Duolingo, and Hello English. Teachers primarily utilize Hello English, with 15 users. While, in Table 2, survey data was collected by 70 EFL students who utilized AI platforms for English learning. The students completed a questionnaire on Google Forms. A detailed explanation of the data concerning the utilization of AI platforms by EFL students is provided below.

Table 3. AI platform is dominantly used by EFL students

No.	AI Tools Categories	Number of Users
1.	**Translation-based AI**	
	DeepL	48
	Reverso	17
	Google Translate	5
2.	**Paraphrasing-based AI**	
	HIX.AI	32
	Quilbott	23
	Grammarly	15
3.	**Plagiarism-based AI**	
	GPTZero	39
	Turnitin	18
	DupliChecker	13
4.	**Chatbot-Powered AI**	
	Deepseek	45
	Gemini	16
	ChatGPT	9
5.	**English-based AI**	
	ELSA	40
	Hello English	15
	Duolingo	15

Table 3 showed that 70 EFL students employed various AI platforms. Students initially employ Google Translate, DeepL, and Reverso in the translation-based AI category. However, DeepL is the most frequently used, with 48 users. This is in line with several studies found the use of translation-based AI platforms such as Google Translate and DeepL is very popular among foreign language learners (Chen et al., 2020; Jiang, 2024; Liang et al., 2023; Polakova & Klimova, 2023). Secondly, students prioritize HIX.AI (32 users) over QuillBot (23 users) and Grammarly (15 users) in the paraphrasing-based AI category. However, there has been no previous research that highlights the use and effectiveness of HIX.AI in learning, so this finding is a novelty in this study. Third, students employ plagiarism-based AI, including Turnitin, GPTZero, and DupliChecker. GPTZero is the most extensively used AI platform, with 39 users. According to Brown & Jensen (2023), the use of GPTZero is very effective in reducing plagiarism and supporting students to create original work. The Chatbot-Powered AI category is primarily used by students, with Deepseek (45 users), Gemini (16 users), and ChatGPT (9 users) being the most popular options. A further finding in this study is that there are no previous studies that have highlighted the use of Deepseek. In the English-based AI category, students employ Hello English, Duolingo, and ELSA. ELSA is the primary AI platform used by students, with a total of 40 users (Ajisoko, 2020; Munthe, et.al, 2024; Rouabhia & Kheder, 2024).

Overall, it can be inferred that the five types of AI platforms mentioned above are mostly used by EFL teachers and students, and they are both similar and different. Both EFL teachers and students predominantly utilize DeepL in the translation-based AI category. In other areas, EFL teachers and students primarily utilize distinct AI platforms. Teachers primarily use QuillBot in the category of paraphrasing-based AI, while students primarily use HIX.AI. Similarly, teachers primarily utilize Turnitin for plagiarism-based AI, while students primarily utilize GPTZero. In chatbot-powered AI, teachers primarily utilize ChatGPT, while students are inclined to employ Deepseek. In the realm of English-based AI, teachers primarily prefer Hello English. Concurrently, students primarily utilize ELSA. Furthermore, the result also shows the challenges and opportunities of using AI in learning as it supports the prior studies that describe the challenges and ethical dilemma faced by the teacher and students (Akgun & Greenhow, 2022) (Akgun & Greenhow, 2021; Syarifuddin, 2023; Wang et al., 2024).

Below an explanation about the challenges and opportunities faced by EFL teacher and students in using AI.

3.2 The challenges faced by EFL teachers and students in using AI platforms

Despite the myriad opportunities of AI in English language teaching, the use of AI in learning also has some challenges to consider. The following are some of the main challenges of AI technology in college English teaching. Based on the data from interview, some challenges found by the EFL students and teachers using AI in learning. First, EFL teachers face challenges while using AI in the classroom. There are four main challenges faced by EFL teachers as follows:

3.2.1 Teachers find it challenging to keep up their duties as facilitators

AI hinders teachers' roles as facilitators by requiring their adaptation to emerging technology and teaching methods. Teachers may experience a sense of being overwhelmed over the need to proficiently incorporate AI into their lesson plans, manage AI technologies, and confront the possible limitations or biases inherent in AI-generated content. Moreover, although AI can automate particular positions, it may raise worries over the disappearance of human interaction in the classroom, demanding that teachers balance their function as facilitators with the increasing integration of AI in education. This pertains to the interview results as follows:

"… it challenging to balance my responsibilities of teaching content with facilitating my students..."
"...reduced direct engagement time…."
"…deficiency in the emotional..."
"…students overlook the chance to pose inquiries…."

Based on the interview data above, difficult to strike a balance between delivering knowledge and helping students understand and apply it. While AI is helpful, technology has taken over many parts of lessons, reducing direct interaction with students. EFL teachers face difficulties in balancing their role as facilitators with the need to integrate ever-evolving AI technologies, leading to limited direct interaction with students and a loss of emotional closeness in learning (Yusriani, Pintor, Purnomo, Indonesia, & Zega, 2024).

3.2.2 Absence of AI platform updates

Unsupported platforms can also pose technical challenges and security risks for teachers. In such a case, the AI may not provide the latest available content and new guidelines, making the teaching process less effective and posing the risk of lost opportunities to improve learning and enhance student engagement outcomes. This refers to interview results as indicated below:

"…uncertain about AI, which is continually growing…"
"… to comprehend how the AI platform works and how to incorporate it..."
"…the class over researching the latest developments in the AI platform..."
"…The institution does not offer a platform for the internal upgrading of information…"

Based on the interview data above, the rapid expansion of AI has been a disruption of teachers' everyday schedules, making them uneasy and refusing to get familiar with it. It has become difficult for teachers to understand how AI platforms are working and holding them in the teaching process. Irregular updates of AI platforms and limited accessibility of AI for teachers and students cause an imbalance in the utilization of this technology (Chiu & Chai, 2020). Few resources or institutional support to update knowledge architecture make it hard to remain in step with advances in AI and also apply them in the teaching environment. Teachers prioritize meeting evolving classroom needs with current responsibilities over researching AI developments.

3.2.3 Restrictions on AI accessibility

Restrictions set by teachers on AI accessibility may impair their ability to effectively utilize AI tools in the classroom. Such barriers might include limited access to necessary technologies, lack of training in the use of AI, or functionalities for basic level into instructional practices. Hence, fostering the teaching techniques and providing personalized learning experiences for students may become a great hurdle in the hands of EFL teachers. This is specifically about the interview results:

"…AI platforms are restricted due to their inability to be downloaded from the app store…"
"…lack a technological background."
"…AI platforms for English language learning may not adequately account for the cultural context and local customs..."
"… subscription fees are typically quite high for platforms...."
"… the platforms are frequently insufficiently flexible to meet the unique requirements of each student."

Based on the interview above, the use of numerous artificial intelligences is constrained by accessibility challenges, such as the requirement for logins or the inability to download from app stores. Moreover, several platforms require technical proficiency, posing difficulties for teachers lacking a technological background. Certain AI systems for learning English may be lacking in cultural context, and higher subscription costs can make advanced platforms less accessible. Moreover, the personalization capabilities of AI platforms remain constrained, frequently providing only rudimentary practice or assessments, and they lack the flexibility to accommodate the varied demands of students. Teachers contend that AI is not yet capable of entirely replacing the individualized approach they offer.

3.2.4 The cost of upgrading premium AI is considerable

The cost of upgrading to premium AI platforms can be significant, with joining fees frequently being a considerable obstacle for teachers and institutions. Costs may make it hard to get access to advanced features and technologies that could make teaching and learning better. This could make it harder to fully integrate AI into classrooms without spending a lot of money. This pertains to the interview results as follows:

"…the high cost of upgrading to the premium version…"
"…the costs of accessing premium features can be costly…"
"…the high cost is frequently an obstacle to the technology's widespread adoption..."
"…compelled to pay expensive subscription fees to gain access to the basic features..."
"…offer free versions; however, the capabilities are typically severely restricted..."

Based on the interview results above, the researchers found that the advanced capabilities of premium AI, including personalized learning and data analysis, the expense of upgrading is a substantial obstacle. Subscription models present challenges for educators who wish to incorporate AI into the classroom, especially as the advantages do not justify the substantial expense for the majority of teachers. Although certain platforms provide free versions, their capabilities are typically restricted, resulting in an imbalance in educational technology accessibility. Teachers frequently encounter obstacles to equitable utilization and extensive adoption due to the higher premium costs. Second, EFL students face challenges while using AI in the classroom. There are two main challenges faced by EFL students as follows:

1. **AI makes students reliant**

AI can reduce the necessity for students to think critically or solve problems independently by offering immediate answers and solutions, thereby fostering a sense of dependence. Students may

become highly dependent on technology, which can impede the development of critical thinking, creativity, and problem-solving skills, as AI provides personalized feedback and automates duties. This dependence may restrict their capacity to learn and adapt without technological support. This pertains to the interview results as follows:

"…increased my reliance on technology for answers or solutions…"
"… may limit my capacity to solve problems manually that need additional effort..."
"…confront more challenging tasks without the support of technology…"
"…automatic AI outcomes without attempting to grasp the method or rationale underlying the material…"
"…risked losing the ability to learn deeply..."

Based on the interview results, researchers explained that frequent use of AI in learning has resulted in increased dependence on technology for instant responses, which can impact critical thought and problem-solving capabilities. Students could develop a dependence on the instant feedback of AI and their capacity to overcome problems on their own diminishes. This dependency impacts their grasping of the fundamental principles, and thus restricts their capacity to grasp topics deeply or acquire academic skills without technology. Furthermore, students' reliance on AI for instant answers can reduce critical and independent thinking skills (Gerlich, 2025; Zainurrahman & Rodliyah, 2024).

2. Not all AI platforms are free, but some are paid

Not all AI platforms are free, and some require a paid subscription to get advanced features and complete capability. Although free editions may provide fundamental tools, monetary ones often come with extra capabilities like customization of learning, analytics and resources which can contribute to enriching the user experience. However, the fees charged by these paid platforms may be too high for some users. It refers to the interview results in the following:

"…can't afford the monthly costs..."
"…inability to access paid premium AI could be a significant concern..."
"…feel left behind if I do not have equal access…"
"…access to premium AI can benefit from superior learning, which influences their readiness to learn, whilst others only have the basics..."
"… free versions with limited capabilities make it difficult for me..."

Based on the interview result mentioned above, the limitation of paid AI platforms creates an ever-greater divide between students who can afford full access and those who rely on the free versions. Often, the free versions have limited features or use lower quality materials and slower access times, which can prove to be obstacles to achieving the best learning results. The disparity between privileged students with access to premium AI and those without, the latter of whom are struggling to catch up. These differences shape preparation and materials accessibility and functionality around learning.

3.3 Opportunities to use AI for EFL teachers

The rapid development of artificial intelligence technology, it has brought opportunities for the transformation and innovation of higher education. The following are some of the main opportunities of AI technology in English teaching. However, AI offers teachers several opportunities for improved planning, implementation and assessment of their teaching as the teachers play various roles in developing technology of AI (Celik, Dindar, Muukkonen, & Järvelä, 2022). Based on the data from interview, it was found that some opportunities were found by the EFL students and teachers using AI

in learning. First, opportunities gained by EFL teachers while using AI in the classroom. There are two main challenges faced by EFL teachers as follows:

3.3.1 Teaching reference

AI can aid teachers in finding teaching references by efficiently searching and categorizing pertinent learning materials, including articles, videos, lesson plans, and research papers. AI platforms can suggest resources that are relevant to the subject, learning goals, and teaching style. This saves teachers time on preparation and makes it easier for them to find new and interesting teaching materials to use in their classes. This pertains to the interview results as follows:

"…help provide more diverse and particular learning resources..."
"…access a variety of learning resources, generate automated practice questions, and provide real-time feedback..."
"…makes it easy for me to teach…"
"…providing well-organized reference information, assisting me in preparing teaching materials, and finding areas for development in teaching..."
"…provide a variety of relevant information and materials based on the topic being taught."
"…provide samples of questions adjusted to the students' level of difficulty…"

Based on the interview results, the researchers found that Artificial intelligence serves as a powerful educational tool, providing varied and specific learning materials, automatic practice questions, and quick feedback. It assists teachers in saving time by systematically arranging reference resources, preparing lessons, and identifying areas for enhancement in their instructional techniques. AI may change the difficulty of questions and suggest good ways to teach based on how well students do on tests. This will help teachers better meet the needs of their students and help those who are having trouble learning. Previous studies support these findings. Oladele (2024) found that the use of AI in language education can increase student engagement and accelerate learning, especially with instant feedback.

3.3.2 The teaching materials that are provided are both innovative and varied

AI delivers various and distinctive ways to learn through individualized learning experiences, automated evaluations, and immediate feedback. These platforms may adjust to specific student requirements, propose various pedagogical strategies and produce dynamic educational resources such as quizzes, videos, and interactive content. Artificial intelligence improves the educational process by increasing engagement, efficiency, and adaptability to various learning styles, hence providing a wider array of materials and methods for teachers. This pertains to the interview results as follows:

"…capable of creating the material to suit the learning preferences and requirements of each student…"
"…generate interactive simulations or exams that assess students' comprehension, pose questions, or provide real-time feedback..."
"…seeking and selecting resources from a variety of media, including lectures, videos, and articles..."
"…access educational resources on a variety of platforms, including mobile (ChatGPT, Duolingo) and web applications (DeepL or Praktika.AI)..."
"…material becomes attractive, and the learning process becomes more enjoyable and comprehensible..."

Based on the interview results, the researchers revealed that Duolingo and DeepL enable teachers to develop personalized learning materials that are suited to the needs of individual students. Based on Dimla et al., (2024) emphasized the role of AI in providing a personalized learning experience for students. These tools assess students' performance and recommend appropriate exercises to improve learning. AI allows for the construction of interactive simulations, real-time feedback, and the integration of multimedia materials such as videos, photos, and animations, making lessons more engaging and effective. Furthermore, AI enables teachers to access numerous educational materials

across several platforms, ensuring that students can learn at any time and from any location, while also analyzing the originality of their work with programs such as Turnitin.

3.4 Opportunities to use AI for EFL students

3.4.1 Fostering proficiency in the digital realm

Artificial Intelligence (AI) has become a driving force in the digital world, offering a wide range of benefits across different fields. AI helps in speeding up data analysis, simplifying information management, and improving operational efficiency. AI algorithms have the ability to process large amounts of data at a much faster speed than humans, allowing for better predictions and real-time customization of content. This gives a significant competitive advantage in today's digital age. This pertains to the interview results as follows:

"…provides a great opportunity to improve my digital proficiency..."
"…allowed me to build important digital skills…"
"…bridge to develop students' digital proficiency and practical experience with relevant technologies…"

Furthermore, AI plays a crucial role in developing digital skills necessary for success in various fields. By incorporating AI technologies in learning tools and platforms, individuals can have access to personalized and adaptive learning experiences. This helps in accelerating the learning curve and enhancing understanding of complex digital concepts. Thus, AI not only contributes to technological advancement but also empowers individuals by equipping them with the required skills to excel in an increasingly sophisticated digital world. Research by Lee & Kim (2021) also confirmed that AI enables more flexible learning by providing learning materials that can be accessed at any time, increasing efficiency.

3.4.2 Using AI for direct practice

Students can employ AI for direct English practice by engaging with platforms that provide specific exercises, immediate feedback, and interactive activities. These platforms include AI technologies like Duolingo, Hello English, and Character. AI and other platforms enable students to practice speaking, writing, reading, and listening abilities in a dynamic manner. These platforms alter the difficulty level based on individual success, allowing students to improve their language abilities at their own speed while also offering rapid feedback to boost learning efficiency. This pertains to the interview results as follows:

"…offers virtual assistant that can provide comments on grammar, pronunciation, and vocabulary...."
"…hands-on circumstances and gain confidence in speaking English in a variety of situations..."
"…discussions or monologues in English and then respond with questions or repeat what they have heard..."
"…instantly delivers feedback on grammar, spelling, and sentence structure when students submit English essays or paragraphs…"

Based on the interview results about, the researcher found that students are afforded the opportunity to engage in direct English practice in writing, listening, and speaking through AI platforms. Students can simulate conversations with native speakers by practicing speaking with immediate feedback on grammar, pronunciation, and vocabulary using tools such as ELSA, Character, and Hello English. By providing exercises in a variety of dialects and speaking styles, platforms such as Speechace, Duolingo, and Praktika.AI assist in the development of listening skills. Platforms such as DeepL and HIX.AI offer immediate feedback on sentence structure, punctuation, and grammar for writing practice, enabling students to rapidly enhance their writing and learn from their errors. Previous studies support these findings. Doghonadze & Kintsurashvili (2022) noted that AI-based

language learning not only facilitates speaking skill but also improves listening skills through simulated conversations with native speakers.

3.4.3 Maximize student learning with more efficacy and efficiency

AI aids student learning by providing adaptive and individualized learning experiences. It examines student performance and optimizes lessons, resources, and exercises based on the specific needs of each student, thereby enabling them to advance at their own time. AI also automates assessments and administrative duties, providing instant feedback that enables teachers to concentrate more on interactive teaching. The efficacy and efficiency of the learning process are improved by the ability of students to access learning materials at any time and from anywhere through the use of AI.

"… an optimal level of difficulty for a more efficient and accelerated learning process…"
"…access educational resources at any time and from anywhere..."
"…delivers prompt feedback upon completing a task or exercise for identify and rectify my errors..."

Based on the interview results, the researchers stated that AI platforms enable students to choose materials that correspond to their optimal learning level, thereby facilitating more rapid and efficient progress. Students have the ability to study at any time and from anywhere with the availability of educational resources all the time. Furthermore, other researcher found that AI enables automatic adjustment of difficulty levels, leading to more effective and student-paced learning (Gligorea et al., 2023; Kabudi, Pappas, & Olsen, 2021). AI offers immediate feedback on assignments, enabling students to promptly recognize and correct errors, thereby facilitating quicker comprehension and a more comprehensive understanding of difficult subjects.

In response to the research findings mentioned above, the use of AI platforms in English as a foreign language (EFL) learning provides a great opportunity to enhance a more personalized and adaptive learning experience for students, with platforms such as DeepL, QuillBot, Turnitin, and ChatGPT supporting various aspects of learning. Nonetheless, the application of AI in higher education also faces significant challenges, including inequitable access, subscription costs, and the potential reduction of students' critical thinking skills due to reliance on technology. However, AI still offers opportunities to improve instructional planning, implementation, and assessment for teachers, as well as provide more interactive and efficient learning experiences for students. Therefore, it is important to adopt a strategic approach to AI integration to maximize its benefits while addressing the challenges related to accessibility and quality of learning.

The implications of this research suggest that while the use of AI in English language learning provides a great opportunity to enhance personalized and adaptive learning experiences, challenges related to accessibility, cost, and reliance on technology still need to be addressed. A strategic for integrating AI is needed, taking into account the access gap between students as well as the potential negative impact on critical thinking skills. For the benefits of AI to be maximized, it is essential to update and align the use of AI platforms across different levels of education, while also ensuring that these technologies support broader educational goals, including the development of self-learning skills and fostering more emotional interactions in learning. The limitation of this study includes the small number of participants both students (non-inclusive) and teachers, and the research only focus on the challenges and opportunities of AI in learning. Then, it is recommended that future researchers use a larger number of participants and engage inclusive students to investigate other aspects, such as AI and students' critical thinking and creativity, AI and collaborative learning, and the use of AI in automated assessment and feedback.

4. CONCLUSION

The findings of this study indicate that Artificial Intelligence (AI) has a significant impact on the English language teaching and learning process. AI tools influence both teachers and students, offering

a range of benefits as well as presenting various challenges. In the EFL context, AI enhances learning through innovative, adaptive, and interactive technologies, yet also raises concerns related to accessibility, ethical use, and over-reliance. The study underscores the importance of integrating AI into English language education as part of a broader effort to promote digital literacy and the development of innovative, creative, and up-to-date teaching materials. This research contributes to the growing body of literature on AI in EFL pedagogy by highlighting the need for structured AI literacy programs for both educators and learners to maximize the advantages of AI while mitigating potential drawbacks. From a policy perspective, educational institutions should establish clear ethical guidelines for AI use, ensure equitable access to legitimate AI tools, and consider subsidizing premium features to reduce digital divides. Overall, AI should be seen not as a replacement for traditional teaching methods, but as a complementary tool to support more dynamic and inclusive English language education.

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