THE INTEGRATION OF ARTIFICIAL INTELLIGENCE (AI) IN ENGLISH LANGUAGE TEACHING (ELT): PROSPECTS AND CHALLENGES

By:

Duwi Wulandary
I2J022007

ABSTRACT

New discoveries of artificial intelligence (AI) in the constantly developing digital world have the potentials to transform English language teaching (ELT). This study is aimed at identifying and describing the ways teachers integrate AI-assisted tools into ELT by using Mishra and Koehler's TPACK and An et al.'s AI-TPACK model, finding its prospects and challenges. This study was conducted at one of Language Centers located in West Nusa Tenggara Province. There were 10 participants involved with a minimum of 10-year teaching experience in the field of ELT. Being qualitative in nature, the participants were selected using the purposeful sampling technique. The data were collected through semi-structured interviews, observations, and documentation. The data was analyzed using thematic analysis. The findings revealed that teachers integrated AI in teaching preparation and conducting assessment of students' work. It was also found that teachers need personalized support for enhancing their AI competencies and tailored support for providing considerable computer network and digital facilities.

Keywords: Integration, Artificial Intelligence, ELT, Prospects, Challenges

I. INTRODUCTION

Education has undergone a transformation as a result of the adoption of information and communication technology (ICT) in the area of English language teaching (ELT). ICT technologies have advanced over the past few decades from simple language programs to complex platforms that actively include students in learning process (Haleem et al., 2022). These technologies cover a wide range of tools, including multimedia, virtual classrooms, language learning applications, and internet platforms. With the growth of ICT in ELT, students now have access to resources that are specifically suited to their learning preferences and requirements (Hidayati, 2016; Azar & Tan, 2020; & Wilkinson, 2016). ICT has furthermore enabled teachers to develop cutting-edge evaluation techniques, tracking progress in real-time and modifying education as necessary. Despite persistent issues like the digital divide and preserving pedagogical efficacy, Dwiono et al., (2018) stated that ICT in ELT is expected to make language learning more approachable, interesting, and effective than ever in the future.

In the 21st century, teachers have integrated technology into English as Foreign Language (EFL) classrooms to improve learning experiences and engage students more effectively (Ansyari, 2015; Cakrawati, 2017; Pardede, 2020 and Zhang, 2022). To improve learning opportunities and engage students, teachers use interactive learning platforms, digital content, language learning apps, online collaboration, adaptive language learning software, and digital assessments. These tools provide as a central repository for all of the required course materials

and assignments, making it simple to access learning materials and resources. The use of technology in EFL classrooms gives teachers the freedom to design engaging, student-centered learning spaces that accommodate a range of learning styles and abilities. To guarantee the best learning outcomes, however, Tharp (2018) and Rapanta et al. (2021) suggested that successful integration requires careful planning, training, and a harmony between technology and conventional teaching techniques.

New discoveries in the constantly developing digital world have the potential to transform how people live. The existence of artificial intelligence demonstrates this evolution. Artificial intelligence (henceforth AI) is gaining popularity and playing an increasingly significant role in our daily lives (Kessler, 2018). AI describes how computers may replicate human intellect and carry out activities that demand logical reasoning, data processing, and decision-making (Reva, 2018). The application of AI may be integrated into a variety of fields, including the English Language Teaching. The integration of AI-assisted tools such as speech recognition, grammar correction, chatbox, and translation into the teaching of the English language has attracted a lot of interest recently (Fitria, 2023; Mueller and Massaron, 2021; & Lu, 2019). Education professionals are looking for innovative ways to improve language learning as technology develops. This study, therefore, aims to investigate the integration of AI in ELT.

As the center of language excellence, the Language Center located in one of the universities in West Nusa Tenggara Province proposes innovative language teaching and places an emphasis on excellent facilities and tools for language instruction. To find out if the language center's teachers had ever included AI technologies into their teaching, personal communication has been conducted previously. From all teachers who teach in the language center, only few who have tried to upgrade their pedagogical practice by integrating AI. The driving force behind this study emerges from the realization that the use of AI can enhance and enrich conventional approaches to teaching languages. AI tools have the ability to deliver individualized learning experiences, immediate feedback, and fun interactive activities.

Few attempts have been made to investigate the effect of using AI Apps on students' language skills (e.g. Utami & Winarni, 2023; Sumakul et al., 2022; & Mijwil et al., 2022), to analyze teachers' perceptions while using AI Apps (e.g. Chiu & Chai, 2020; Oktalia and Drajati, 2018; Ji et al., 2023; Kim et al., 2022). However, little research has been conducted on how EFL teachers integrate AI Apps in their classrooms, along with its prospects and challenges. This study, therefore, aims to explore AI-assisted tools integration, potential drawbacks and advantages of using AI in language teaching, addressing questions regarding how to strike a balance between the use of technological apps and human instruction. By conducting this study, the researcher hopes to gain insightful knowledge on how to effectively integrate AI technologies into English language teaching and ultimately create more successful and engaging language learning environments for students. In order to provide insights into how AI might effectively improve language instruction and guidance for educators, curriculum designers, and policymakers on how to take advantage of AI's potential advantages while avoiding its potential drawbacks in the context of ELT, these issues are addressed in the research.

The research questions of this study are as follow:
1. How do teachers integrate AI in ELT?
2. What are the prospects of integrating AI in ELT?
3. What are the challenges of integrating AI in ELT?

II. METHOD

This qualitative case study aims at investigating the ways teachers integrate Artificial Intelligence (AI) Apps in their teaching practice, the challenges they encounter and how they cope with those challenges. Understanding and interpreting the complexity of human behavior, experiences, beliefs, and social events are the goals of qualitative study (Creswell, 2012; Leavy, 2022; and Ormston et al., 2014). When collecting the data, this study employs in-depth interview, observation and documentation. The data were analyzed using thematic analysis. In-depth interview is an effective and adaptable method of qualitative study which enables researchers to engage participants in free-flowing interactions. This study, hence, employs semi-structured interview about the AI apps which teachers integrate into ELT. Open-ended questions were utilized to empower participants to fully express their thoughts, beliefs, and experiences. Moreover, the researcher in this study acted as a non-participant observer to dig detail information and understanding on the ways teachers integrate AI into teaching and learning. During the observation, field notes, photos and videos were also taken. This study employed documentation in the form of lesson plan, student's worksheet, videos, photos and other relevant documents. This study was conducted in a language center in one of universities located in West Nusa Tenggara Province. The participants in this study were 10 teachers in the Language Center with at least ten years of experience in the field of ELT.

III. FINDINGS AND DISCUSSION

3. 1. AI-assisted Tools in Teaching Preparation

Based on the findings of this study, there are two prospects of integrating AI in ELT namely, AI-assisted tools in teaching preparation and AI-assissted tools in conducting assessment. Therefore, the following section describes the details on the ways of integrating AI-assisted tools in teaching preparation and conducting assessment. The findings regarding the ways teachers integrate AI into ELT are discussed in each respective prospect. The teaching preparation referred to in this finding is the development of teaching materials. Teachers at the Language Center practice their AI-TPACK skill in developing considerable learning material. As seen in Figure 1 below, there are several processes involved in developing material: identifying need, generating content (for reading, writing, and speaking material), scripting and generating audio (for listening material) and finalizing material.

Figure 1. Process of preparing teaching materials with AI-assisted tools
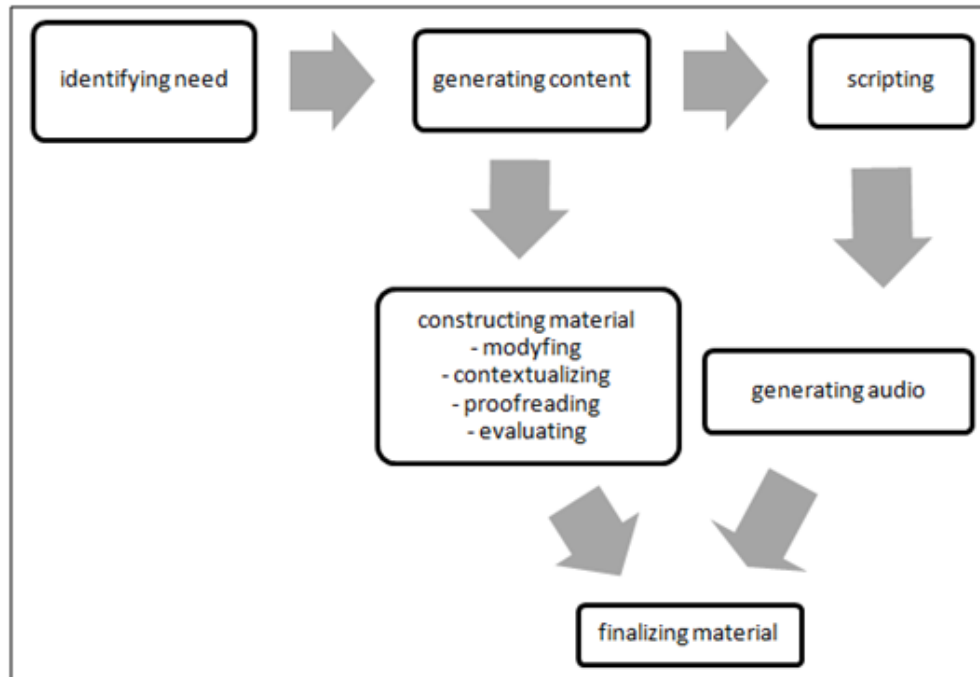
The pedagogical knowledge (PK) and technological knowledge (TK) of the teachers are inescapably associated with the teaching preparation, which involves developing material through AI integration (AI-TPK). Teachers go through a variety of knowledge-intensive stages in the material production stage, not all of which can be covered by AI. These phases include evaluation, proofreading, contextualization, and modification. While AI has the capability to generate information based on given prompts, the precision and timeliness of the content are not consistently guaranteed, thus not always reflecting the latest developments in knowledge. This stands in contrast to existing literature, which posits that AI, rather than eliminating the need for human interaction, serves to foster prudent decision-making and enhance overall productivity (Li et al., 2017). The potential compromise in material quality and accuracy arises when relying on AI-generated content, especially in comparison to content generated by humans. Aligning with pertinent literature, it becomes imperative to ensure that AI-generated content adheres to a standard of accuracy and aligns seamlessly with educational objectives (Meyers and Nulty, 2009). In this case, teachers' TCK skill is being implemented. From the beginning of development to the finalization of teaching materials, teachers practice the ability to integrate technology, content, pedagogy and AI (AI-TPACK) to produce teaching materials that are appropriate to the context and learning objectives.

3. 1. AI-assisted Tools in Conducting Assessment

According to the data gathered from interviews, observations, and document analysis, it is evident that among a total of 10 teachers, only two of them integrated AI

tools to assist them in assessing student assignments. They also employ a wide range of AI tools to assess different skills. AI-assisted tools integrated in conducting assessment for writing are Grammarly, Quillbot, and Toolsaday; for speaking is Orai AI; and for reading are Typeform and AI quiz maker. Following the findings of this study, teachers are focusing on assessing students' speaking, reading, and writing skills when integrating AI into assessments. Depending on the skill being evaluated, different AIs are employed (e.g., Toolsaday AI for writing, Orai AI for speaking, and AI Quiz Maker for reading). Integrating AI in assessing listening skill, however, has not been applied by teachers at the Language Center.

When incorporating AI technology into assessment procedures, teachers need to consider about how AI might improve current assessment approaches. Teacher's AI-TPK is fully exercised in this case. As stated in the previous study (e.g. Chassignol et al., 2018), AI can help teachers develop innovative techniques for assessment using AI-driven writing assistants, Toolsaday and Chatbot for instance, are able to automatically assess and grade student work by identifying elements like grammar, sentence structure, and word usage. They may also offer comments on the writing work (Ramesh & Sanampudi, 2021). As indicated by Ng et al. (2021), few studies currently address how teacher education programs could improve teacher's AI digital competency to apply AI for teaching, learning, and assessment. Four cognition domains—know and comprehend, use and apply, assess and create, and ethical issues—are suggested to promote AI capabilities in accordance with Bloom's taxonomy as suggested by Ng et al. (2021). They also recommend using the TPACK model by Mishra and Koehler (2006) to assist teachers in creating pedagogies, subject knowledge, and technological strategies that are suited for K–16 learning. With the existence of a special program to train teacher AI competency, the assessment carried out is not only limited to certain skills but can cover other skills and elements. This is consistent with the recommendations in the literature (Cavalcanti et al., 2021) that AI has the potential to significantly increase managerial efficiency and provide automatic feedback. Therefore, teachers need to become proficient in using diverse forms of artificial intelligence technology to supervise a record of students' advancement, accelerate the delivery of feedback, and enable them to evaluate and modify their pedagogical approaches.

3. 2. Challenges from teachers' perspectives

Almost all participants believed that current developments in AI technology must also be accompanied by developments in teachers' technological mastery abilities. Currently, teachers at language centers have not received special training on AI technology in ELT, so most of them acquire the skill of integrating AI technology through independent learning. Therefore, it is undeniable that they have different levels of AI competency. The language center's teachers proposed that an immediate workshop or in-depth training focused on examining AI in education, particularly English language instruction, be

conducted. The results of this study indicate that, in accordance with pertinent literature (e.g., Christudas et al., 2018; Liu et al., 2017; Guo and Li, 2018), teachers need to be knowledgeable with and comfortable with utilizing generative AI technologies in order to use them effectively. Along with developing digital abilities, they also need to learn how to use these tools pedagogically. This study emphasizes the need for specialized support, such as interactive workshops, self-paced courses, and individualized or personalized coaching, to help teachers enhance their AI teaching abilities. This aligns with the suggestions found in the literature (Hrastinski et al., 2019).

3. 3. Challenges from technological perspectives

Due to AI's limitations, teachers felt the need to possess additional digital skills in order to create complicated audio that meets their demands. The capacity to generate content is another difficulty arising from the technological barriers that teachers have when integrating AI. Until recently, ChatGPT's algorithm for example, can only access data through 2021. It cannot, however, respond to inquiries on recent events. For instance, ChatGPT is unable to provide the desired content when we request the most recent ELT research articles in 2023. This is one form of limitation of AI technology. Therefore, even though teachers possess strong AI-TK skill but the AI tools itself have limitations, the integration process might not effectively intertwined.

One important factor in the integration of digital technologies has been identified as access to resources, which includes the availability of digital technologies and technical help (Bai & Lo, 2018; Li, 2017; Lutz, 2019). There are currently plenty of free AI apps available, but there are also more costly ones. Depending on their requirements and financial situation, teachers may find this to be challenging. When comparing free AI apps to paid ones, the former may provide less features or more limited capabilities in terms of functionalities. As a result, teachers might not be able to utilize an app to its full potential, whereas premium apps often provide more sophisticated features, enhanced functionality, and superior customer service. This can be essential, particularly if teachers want greater integration and customized services. Therefore, Ng et al. (2022) made the suggestion that in order to supply the required funds and resources, it is necessary to get assistance from both private and public organizations.

IV. CONCLUSION AND SUGGESTIONS
5.1 Conclusion

This study explores into the integration of AI in ELT, highlighting its implications for language learning and pedagogical practices. The findings contribute to the prospects of integrating AI-assisted tools in teaching preparation and conducting assessment. This study also discovers that the integration of AI in ELT comes with challenges from teachers and technological perspectives. For teachers to improve their AI competencies, they are required to receive individualized support. Providing interactive seminars, self-directed

learning opportunities, and customized coaching initiatives may enable teachers to successfully integrate AI into their pedagogical practices. Teachers have challenges with the availability of computer facilities, AI-assisted tool accessibility, and AI technological constraints. Overcoming these challenges requires customized support for ensuring the availability of significant digital facilities. This entails making certain that teachers have unrestricted access to AI technologies, strong computer resources, and continuous technological support.

5.1 Suggestions

This study advances our knowledge of the professional development, pedagogical expertise, and digital competency that language teachers require in order to incorporate AI in ELT. The following suggestions are intended to help teachers, education institution, policy makers and future researchers in developing settings where AI technologies can be effectively implemented to improve language teaching and learning.

First, **for teachers,** it is highly advised to emphasize the importance of artificial intelligence (AI) in education, recognizing its potential to enhance language learning through personalized instruction, feedback, and assessment. Strategies such as engaging with expert speakers and participating in webinars can facilitate effective implementation. Additionally, teachers should regularly evaluate and monitor AI tools in the classroom to assess their efficiency. This involves staying informed about student performance, seeking feedback from both students and fellow teachers, and making necessary adjustments for continuous improvement. Furthermore, teachers are required to stay updated with AI developments to remain informed about the latest advancements and potential applications in education. This knowledge enables teachers to make informed decisions when integrating new tools into their teaching methods.

Second, **for education institutions**, it is essential to integrate AI in teacher education program by incorporating AI-related competences into pre-service teacher education programs' curricula. Collaboration with the curriculum creators will help achieve this. Moreover, providing teachers with training to increase their understanding of AI or collaborating with AI experts who can guest lecture or co-teach are suggested as two possible alternatives. Moreover, it is necessary to update and evaluate professional development activities on a regular basis. Employ structured assessment methods such as questionnaires, interviews, and in-class observations are suggested to evaluate how well professional development initiatives are advancing English language teachers' proficiency in AI-related areas.

Third, **for policy makers,** it is crucial to consider investing in infrastructure and training. It is suggested that they allocate funds for the establishment of the essential infrastructure and teacher preparation programs so that AI can be successfully incorporated

into teaching and learning. In addition, it is highly beneficial to have policy makers who form partnerships with stakeholders in language instruction. Moreover, policy makers are strongly encouraged to facilitate AI research and development. It is suggested to provide financial support to programs aimed at integrating AI into education. This type of assistance may promote creativity and lead to the development of useful AI systems specifically designed for educational settings.

Fourth, **for future researchers**, it is strongly encouraged to study the integration of AI-assisted tools in the process of English teaching and learning. Since this study focuses on AI integration seen from the teacher's perspective, it is recommended that future researchers also look at it from the student's perspective. Additionally, research on the efficiency of AI integration in ELT is advised in order to assess the impact of AI-assisted tools in language learning outcomes, student engagement, and language acquisition.

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