

CHAPTER I

INTRODUCTION

This chapter is about the research context, research question, research objective, research significance, and definition of the key concepts. The whole background of this research and the aim of it is described in this chapter.

A. Research Background

The phenomenon of AI or Artificial Intelligence is a technological development that has become a significant topic and has attracted worldwide attention in recent years. AI refers to the ability of computers or computing systems to perform tasks that previously required human intelligence (Taeihagh, 2021; Wang, 2019). It covers aspects such as natural language processing, facial recognition, data analysis, planning, and decision-making. One important aspect of the AI phenomenon is the ability of machines to learn and adapt on their own (Zhang et al., 2022). This is known as Machine Learning (machine learning). In machine learning, algorithms, and statistical models are developed to analyze and interpret data, learn patterns, and generate relevant predictions or actions (Knox, 2020). This process allows the machine to improve its performance over time by continuously collecting and processing new data. One of the prominent implementations of AI is in the field of facial recognition and speech recognition. Facial recognition systems can recognize individuals based on their unique facial features, while voice recognition systems can convert speech into readable text. It helps in identity authentication, security, and other applications (Ahmad et al., 2021; Roll & Wylie, 2016).

The phenomenon of AI has also brought about changes in the education industry. Artificial Intelligence (AI) in education has changed the learning landscape in significant ways (Ameen et al., 2021). With AI, education becomes more personal and adaptive (Daniela, 2019). Learning systems that use AI can analyze student data individually, enabling personalized learning according to the needs and preferences of each student (Signol et al., 2018; Vincent-Lancrin &

Vlies, 2020). In addition, AI also supports adaptive learning by adjusting the level of difficulty, teaching methods, and learning materials according to student progress (Zhang & Tao, 2021). Evaluation is also enhanced by AI, which enables more accurate and objective evaluations. AI virtual assistants and tutors provide interactive assistance to students, answer questions and provide real-time guidance (Liu & Liu, 2019). In terms of learning data analysis, AI is able to analyze data from various sources and provide insights to teachers about student learning patterns, so that decision-making can be based on better data. In addition, AI is also used in the research and development of more effective learning methods and the development of innovative educational applications and tools.

The implementation and application of AI in education can open up new opportunities to improve students' language learning (Zhai et al., 2021). One of the languages that students need in improving their abilities is English. English is a language that needs a lot of practice and continuous improvement and mastery. Based on this, AI will become a learning tool that can help students develop their abilities in learning English. With the help of AI, students can access an adaptive learning platform that provides materials and exercises tailored to their individual needs so students don't feel bored. In addition, AI tutors can provide interactive guidance and feedback, helping students understand English grammar, vocabulary, and pronunciation more effectively. In addition, AI assists in more accurate assessment and evaluation, enabling teachers to provide detailed feedback and identify common mistakes in English. AI virtual assistants and AI tutors also play an important role in helping students understand the material, answering questions, and providing individual guidance. Analysis of learning data using AI provides insight to teachers about student learning patterns and the factors that influence learning English. The AI phenomenon also facilitates research and development of more effective learning methods and innovation in the development of educational devices and applications.

The current phenomenon of AI has influenced the use of AI which is increasingly popular among English teachers around the world. Many schools and language courses use AI as a platform for learning English (Prabjandee, 2023)

because various studies have found the use of AI as a tool for learning English material. This proves that various studies have been conducted to determine the extent to which the use of AI can be an alternative medium in learning English. The results of many previous studies show that AI has started to be widely used as a teaching medium, especially in English. The use of AI provides a more fun and interactive learning experience for students (Jeon, 2021).

The use of AI in previous studies of AI in learning English was limited in scope, sample size, and generalizability. Therefore, it is necessary to systematically analyze the literature to synthesize the results of previous research and provide a more comprehensive understanding of the use of AI in learning English. Systematic literature analysis can provide more accurate and valid information by analyzing data from various studies in a comprehensive and in-depth manner to draw stronger and more evidence-based conclusions. It is hoped that systematizing the analysis of the literature on the use of AI in learning English will provide a clearer and more reliable picture of how AI is used in learning English. This research can offer specific recommendations regarding the use of AI as a tool for learning English to help students solve problems encountered when learning English, such as grammar, vocabulary, and pronunciation. In addition, this research also enables the development of AI virtual assistants and tutors capable of providing interactive guidance and feedback, improving the quality of interaction between students and technology. With AI research in English education, it could be gain a deeper understanding of the potential of this technology to improve English skills effectively and efficiently. This will help open up new opportunities in teaching English and provide students with a more personalized and adaptive learning experience.

B. Research Questions

Based on the background of the study, the problems of this study were formulated as follows:

1. What kinds of AI forms are used in EFL classes across different levels of Education?
2. How do teachers use AI in EFL classes across different levels of Education?

3. What are the benefits and challenges of incorporating Artificial Intelligence (AI) in EFL classes at different levels of Education?
4. What are the teachers' and students' perceptions of the implementation of Artificial Intelligence (AI) in EFL Education?

C. Research Objectives

Based on the research problems, the studies will intend:

1. To find the kinds of AI forms used in EFL classes.
2. To know the use of AI in EFL Education across different levels of education.
3. To find the benefit of Artificial Intelligence (AI) at different levels of EFL Education.
4. To know the teachers' and/or students' perceptions and/or responses to the implementation of Artificial Intelligence (AI) in EFL Education.

D. Research Significance

The findings of this research are anticipated to contribute for:

1. Learners and Teachers

This research will be important for learners, teachers, and educators to understand the extent to which the use of Artificial Intelligence is incorporated in EFL classes across different levels of education. This understanding is expected to lead the parties towards a more fruitful employment of Artificial Intelligence in the process of teaching and learning EFL, especially in an instructional setting, including the selection of the kinds of AI, the strategies and to better cope with the challenges.

2. Policy Maker

The results of this study can be used as material for consideration to determine the importance of choosing the right variant of Artificial Intelligence teaching-learning tools for teaching various skills in English.

3. Other Researcher

The results of this study can be a useful source of information for other researchers interested in investigating the use of artificial intelligence

(AI) as a teaching tool. In other words, this research can serve as a useful scientific reference for their research.

E. Definition of the key terms

The definition of key terms is important to be given to avoid misunderstanding. Referring to the topic that will be discussed in the study, some terms need to be defined as follows:

1. Artificial intelligence (AI)

Artificial intelligence (AI) is a field of computer science devoted to solving cognitive problems commonly associated with human intelligence, such as learning, problem-solving, and pattern recognition.

2. Teaching Tool

A device or material used by teachers or teachers in communicating subject matter to students and helping facilitate the learning process in the classroom. Teaching tools serve as a means to clarify, describe, and illustrate concepts and information to students interactively and effectively.

3. Learning English

A process of acquiring knowledge, skills, and understanding of English, which is one of the most commonly used languages globally.

4. Systematic Literature Review

A systematic literature review is a comprehensive and structured approach to investigating and combining all available information on a particular research question or topic.