CHAPTER I

INTRODUCTION

1.1.Background of the Research

The development of artificial intelligence technology is essential for students to follow to make learning easier. Interest in artificial intelligence (AI) in the context of education has grown (Patrilineal, 2023). In the current digital era, the integration of AI in higher education has transformed how students interact with content, peers, and instructors, enabling a more dynamic and meaningful learning experience. Significant changes have been brought about in the field of education by the advancement of information and communication technology (ICT), particularly with the rise of artificial intelligence (AI) as a learning aid that is becoming more and more popular (Manuel et al., 2023). In addition, to affecting industry and communication, the quick advancement of technology has also had a big impact on education (Fajriati et al., 2024). An artificial intelligence (AI) dialogue system is a software application that simulates natural human dialogue through the use of text or text-to-speech functions (Zhai & Wibowo, 2023).

AI offers a range of platforms and technologies that can improve learning for students and support adaptive learning. The students think that AI-based applications are innovative and helpful for improving learning English skills (Enzelina et al., 2023). AI has been used in higher education in a number of ways, including automated evaluation tools that expedite the assessment process, virtual assistants that assist students with assignments, and adaptive

learning systems that can tailor course materials to each student's needs and learning preferences (Faisal, 2024). English instruction in schools and higher education institutions will change, and changes are going to be made to the way that learning and education are conducted as well as the history of the Internet and schooling (Yang & Zhang, 2025). Artificial intelligence (AI), big data, and online learning platforms are examples of digital technologies that facilitate adaptive learning and have the potential to significantly enhance learning outcomes and student engagement (Pendidikan et al., 2024).

Artificial intelligence (AI) has brought revolutionary opportunities to education, particularly in language acquisition. In the context of English as a Foreign Language (EFL), chatbots, intelligent tutoring programs, and language apps are examples of AI-based technologies that provide tailored, instantaneous feedback and adaptive information (Enzelina et al., 2023). The deeper cognitive processes required for meaningful language acquisition are also supported by these improvements, in addition to linguistic competence (Syahira et al., 2023). Students are no longer passive recipients of knowledge but active participants in an interactive, responsive learning providing an essential foundation for deep learning (Shi, 2022).

AI supports deep learning by allowing students to understand material more deeply through adaptive and interactive learning. Personalized learning has been reshaped and rebuilt by the return of artificial intelligence technology in the age of artificial intelligence, with machine learning and deep learning serving as the main support. Internet education allows students to access the learning materials

they require at any time and from any location, and artificial intelligence further offers learners individualized services (Xu et al., 2022). AI can identify each student's specific learning needs and tailor teaching materials and methods accordingly (N. L. Rane et al., 2024). This allows students to gain a deeper understanding of the material and develop higher-order thinking skills. A lot of effort has gone into developing a high-quality evaluation of English instruction using artificial intelligence, deep learning, machine learning, big data, and other technologies (Shi, 2022).

Even with the potential benefits, students' perspectives on the use of AI in English language instruction are still lacking, particularly when it comes to its potential to promote deep learning. Deep learning is the capacity of a learner to interact critically with material, make connections between concepts from other domains, and apply information in novel ways (Weng et al., 2023). The success of deep learning is greatly influenced by students' engagement, motivation, and critical reflection, so it is important to understand how they view these AI enhanced learning opportunities (Xi-Hui Jia, 2024). As a result, documenting their perspectives can offer a useful perspective on how AI technologies are viewed and applied in real-world situations (Rusdin et al., 2024).

The function of artificial intelligence (AI) in English language learning has been studied in the past, particularly in terms of student acceptance and effectiveness. For example, a study by Ho & Nguyen (2024) showed that using AI in English learning can improve students' linguistic skills through personalized feedback. Meanwhile, another study by Monib & Mahmud (2025)

highlighted that although AI provides convenience in learning, there are still challenges in playing with this technology Exploring learners' experiences and perceptions as a learning tool in higher education. The study by Rusdin et al. (2024) analyzed the study to give a thorough grasp of how English as a Foreign Language (EFL) learners view the advantages and drawbacks of artificial intelligence (AI) in relation to critical thinking. The study by Fadli,F & Iskarim, M (2024) analyzed to reveal the AI students often use in learning and their problems. A study by (Al, 2023) highlighted the different ways AI is being used in higher education, where a model for enhancing students' cognitive abilities is put out and contrasted with other algorithms now in use. Another study by (Faisal, 2024) analyzed AI affects students' intelligent mindsets in higher education settings in an effort to offer suggestions for a more sensible and successful application of AI in the classroom.

However, few studies examine students' perceptions of AI in English learning by considering students' linguistic skills and the effectiveness of AI. Fewer have examined how students perceive AI's contribution to their higher-order thinking skills, such as analysis, evaluation, and synthesis in language learning. This gap underscores the importance of this research, which aims to explore how AI possibly hinders students' deep learning in English language education. Therefore, this study aims to explore how students perceive the use of AI in English language learning from the perspective of deep learning. The results of this study are expected to provide new insights for the development of

AI technologies that are more effective and suitable for learning needs in the digital era.

In the Indonesian higher education context, the concept of deep learning has evolved in line with the Merdeka Curriculum 2025, which promotes the three integrated pillars of meaningful, joyful, and mindful learning. These three components collectively referred to as Deep Learning Ful-Ful aim to transform learning into an experience that is intellectually deep, emotionally engaging, and consciously reflective. In language education, meaningful learning ensures that students connect English with authentic, real life contexts. Through pleasurable learning experiences, joyful learning boosts motivation and emotional health, while mindful learning promotes reflection, awareness, and self-control throughout the learning process.

These three elements can be effectively enabled by artificial intelligence (AI) technology due to their data-driven, adaptable, and interactive features. AI, for example, can bring gamified and pleasurable tasks, tailor valuable content, and encourage reflective awareness through progress metrics. Therefore, the integration of AI into English language learning aligns perfectly with Indonesia's Deep Learning Ful-Ful vision fostering learners who are not only skilled but also motivated and self aware.

1.2.Statement of The Problem

Based on the background above, the problem of the research can be formulated in the following questions:

1. What are the challenges of using AI in English learning from the perspective of deep learning?
2. What are the advantages of using AI in English learning from the perspective of deep learning?
3. How do students perceive using AI in English learning to enhance their deep learning?

1.3. Purpose of the Study

Based on the problem statement above, the objectives of this research are as follows:

1. To identify the challenges of AI implementation in English learning, focusing on deep learning aspects
2. To identify the advantages of AI implementation in English learning, focusing on deep learning aspects
3. To analyze students' perceptions of AI in enhancing deep learning in English learning.

1.4.Significance of the Research

This study is expected to offer both theoretical and practical benefits, which are elaborated as follows:

1. Theoretical Benefits

1.1 Contribute to academic studies on the integration of AI in English learning, especially in deep learning.

1.2 Enrich scientific references related to the use of AI technology in language education, as well as its influence on students' cognitive processes.

2. Practical Benefits

1.1 Provide insight for educators in understanding how students respond to the use of AI in English learning so that they can optimize teaching strategies.

1.2 Assist educational technology developers in designing AI platforms that are more in line with students' needs in developing deep learning.

1.3 Be a consideration for educational institutions in determining policies related to the integration of AI in the English learning curriculum.

1.5.Operational Definition

1) Artificial Intelligence

Artificial Intelligence (AI) must be used in English language instruction. Algorithm-based technology and machine learning assist the English language learning process by providing personalized, interactive, and adaptive materials according to students' needs. AI-powered tools can help researchers quickly and efficiently process large amounts of data and identify relevant information, saving time and resources (Al, 2023).

2) English Language Learning

Learning English is a dynamic process that includes developing speaking, listening, reading, and writing abilities using a variety of approaches, such as online resources, self-study, and Learning English is a

dynamic process that includes developing speaking, listening, reading, and writing abilities using a variety of approaches, such as online resources, self-study, and formal schooling. By offering individualized feedback and interactive learning opportunities, artificial intelligence's incorporation into English language instruction has completely transformed conventional teaching strategies. Knowing how to use the language for a range of different purposes and functions (Farrell, T. S., & Jacobs, G. M. 2020).

3) Deep Learning as a Learning Model

A learning process that allows students to understand English material deeply, not only by memorizing but also by connecting concepts, applying them in various contexts, and developing more complex understanding through AI. Deep learning principles and meaningful pedagogy in language acquisition within higher education, emphasizing their potential to transform traditional approaches to language learning (Mariani et al., 2024).