CHAPTER I

INTRODUCTION

1.1 Research Background

Artificial Intelligence (hereafter referred to as AI) is one of the most important technological advances that has developed in the last few decades. AI can be defined as the ability of machines to perform tasks that typically require human intelligence (Gil de Zúñiga et al., 2023). It can solve problems, learn, and make decisions by operating manually or interacting with humans to perform specific objectives. The capabilities of AI are recognized as having great potential for application in education. According to Lazzat (2024), AI is one of the most prominent innovations in the education sector. Numerous applications of it in education have emerged since 30 years (S. Wang et al., 2024). The application of AI in education is also happening in Indonesia. Based on Oktavia and Suseno (2024), AI has great potential to transform education in Indonesia. AI in Indonesia is used in elementary to higher levels of education and across all subjects, including English instruction in universities.

One of the most used AI types in Indonesian higher education is Generative AI. It is a type of artificial intelligence that can create new content by learning patterns from existing data and generating outputs that resemble human-produced work. The content can be in the form of text, images, audio, or video. ChatGPT, Gemini, DALLE, Suno AI, and many more are examples of Generative AI tools. These tools have been increasingly adopted in education, particularly in higher

education (Jauhiainen & Guerra, 2023). In Indonesia, F. Dewi (2025) found that English teachers at the primary and secondary levels have utilized ChatGPT, Diffit, and Brisk. Similarly, Saputra et al. (2025) reported that high school teachers have utilized ChatGPT and DeepSeek. Aditiya et al. (2025) reported that educators and administrators in schools have started to adopt various generative AI systems, such as ChatGPT and Midjourney. Moreover, Kharis et al. (2024) also found that 81.6% of educators in Indonesia, including lecturers, have used Generative AI. The popular use of Generative AI is due to its potential benefits.

This aligns with the data from a preliminary interview conducted by the researcher in three universities in the Buleleng District. It was found that lecturers who teach English in those universities use Generative AI in teaching English. Most of them are using ChatGPT, Gemini, and Microsoft Copilot. One of the reasons for the widespread use of Generative AI in Indonesian higher education is its benefits.

Generative AI offers various advantages for lecturers in English instruction in higher education. It has the potential to improve both quality and efficiency in teaching English in higher education (Enzelina et al., 2023; Lund & Wang, 2023). By using Generative AI tools, like ChatGPT, lecturers can complete their administrative tasks more efficiently (Chen et al., 2020; Eke, 2024) and help lecturers to monitor AI ethical use among students (Winarsa et al., 2025). Thus, lecturers can focus more on designing instructions and teaching. Wang (2024) also argued that Generative AI improves teaching content. It can produce various kinds of English teaching materials, such as texts for reading comprehension, PowerPoint presentations, and English video explanations. This advantage is also valuable for

lecturers who are obligated to conduct research (C. Dewi, 2023). Generative AI could be used as a tool in conducting research in higher education (Rasul et al., 2023). This aligns with the preliminary interview at University A, where EFL lecturers utilized Generative AI to create teaching content and support their research.

Despite the promising advantages, Generative AI also has several potential drawbacks. According to Baidoo-Anu and Ansah (2023), the drawback is that Generative AI lacks deep contextual and conceptual understanding. This means its answers can be inaccurate. Relying too much on it may also reduce real interaction between lecturers and students, making teaching activities feel less personal (Budiarta & Kusuma, 2024). Overreliance on these tools can also minimize students' critical thinking. There are also risks related to biased information, privacy, and data protection (Chounta et al., 2022). Generative AI often relies on large datasets that may not always be verified. It can expose users' personal information, which amplifies the risk of data leakage (Ye et al., 2024). Furthermore, Generative AI may encourage plagiarism, cheating, and the spread of misinformation (Kusumaningrum et al., 2023), which can undermine academic integrity and devalue academic qualifications. Lacking appropriate guidance and critical feedback from lecturers, the use of Generative AI in teaching may lead to these drawbacks and result in poorer learning outcomes

In order to minimize its drawbacks and successfully utilize Generative AI in English instruction in Indonesian higher education, the readiness of English lecturers to use it is important. Moreover, in the era of rapid adoption of Generative

AI in education, there is a need to understand educators' readiness to teach using it (Eke, 2024; Moorhouse, 2024). Lecturers who feel unready to use AI will resist and cannot use it effectively (Chounta et al., 2022). However, educators often meet readiness challenges in using AI in education (Chounta et al., 2022). According to the survey conducted by Firaina and Sulisworo (2023), some lecturers in Indonesia were not prepared or confident in adopting AI. This indicates that there is a gap between the highly potential benefits of generative AI, and the readiness of lecturers to use it.

Several studies from different regions have examined the readiness to use AI. In Nigeria, Ayanwale et al. (2022) explored teachers' readiness to teach AI as a subject in schools, while Eke (2024) assessed teacher educators' readiness to adopt AI in various subjects. Both studies indicated that the subjects had a high level of readiness to teach AI (Ayanwale et al., 2022) and to adopt AI (Eke, 2024).

In Hong Kong, Guan et al. (2025) investigated pre-service K–12 teachers' preparedness in integrating AI, and Moorhouse (2024) examined the readiness of first-year English teachers to use generative AI compared to beginning teachers. Chan and Tang (2024) also studied the readiness of pre-service English teachers to use AI. They found that pre-service teachers use AI selectively and need more knowledge of AI fundamentals (Guan et al., 2025), first-year teachers are generally ready to use generative AI while beginning teachers are less prepared (Moorhouse, 2024), and overall, pre-service English teachers feel confident and prepared to integrate AI into their classrooms (Chan & Tang, 2024).

Furthermore, in Indonesia, Priantini et al. (2024) studied AI readiness among Indonesian and Indian ELL lecturers, and Purnama et al. (2025) investigated the readiness of general subject teachers in North Bali. Their findings show that lecturers generally have high readiness to integrate AI into English language learning, supported by the proactive efforts they have made (Priantini et al., 2024), while urban teachers are more prepared than rural teachers, largely due to greater access to training materials and technology (Purnama et al., 2025).

In addition, there are some suggestions to conduct a study in a new setting and with a different method. Similar studies should be conducted in different contexts or countries to improve the generalizability of findings (Moorhouse, 2024; Guan, Zhang, & Gu, 2025; Priantini et al., 2024; Purnama et al., 2025). Explanatory sequential design is recommended to explore similar topics (Chan & Tang, 2024; Rahimi & Sevilla-Pavon, 2024; Ayanwale et al., 2022).

The studies that are mentioned above show that most existing research has focused on general subjects, not focusing on EFL. They also concentrated on conducting a study with pre-service and in-service teachers as the subjects of the study. The study of EFL lecturers' readiness in using Generative AI in the Buleleng District remains limited. Therefore, this study aims to fill that gap and respond to the suggestion by investigating the readiness of EFL lecturers in the Buleleng District to use Generative AI, employing an explanatory sequential design and the RAIS instrument.

1.2 Research Problem

Artificial Intelligence (AI) has become increasingly prominent in the field of education, particularly in higher education institutions where lecturers are expected to utilize advanced technology to support teaching and research. One of the most widely used AI tools today is Generative AI, a generative language model that provides human-like responses and has been integrated into educational settings worldwide. In Indonesia, the adoption of Generative AI among lecturers has grown rapidly, with 63.75% of lecturers reporting its use in their teaching activities (Niyu et al., 2024). Additionally, 81.6% of educators stated that they have used Generative AI (Kharis et al., 2024).

Generative AI is popular in education especially when it comes to teaching English as a foreign language. This is because Generative AI has a lot of advantages. It can create teaching content (C. Wang, 2024), reduce lecturers' administrative tasks (Chen et al., 2020; Eke, 2024), and assist them in conducting research (Rasul et al., 2023). To get these advantages lecturers have to be ready to use Generative AI. Unfortunately, some lecturers are still not confident and ready to use AI (Firaina & Sulisworo, 2023). This shows that there is a gap between what Generative AI can do and how ready educators are to use it.

The preliminary study found that EFL lecturers in three universities in the Buleleng District use Generative AI in their teaching practices. However, their readiness remains unknown. Previous research has often focused on AI readiness in general teaching contexts (Ayanwale et al., 2022; Eke, 2024), among pre-service teachers (Chan & Tang, 2024; Guan et al., 2025), or in different countries and

educational levels. Yet, there is still a lack of studies focusing on in-service EFL lecturers in specific Indonesian regions like the Buleleng District. Thus, this study seeks to fill the gap by investigating the readiness of EFL lecturers to use Generative AI in the Buleleng District.

1.3 Research Limitation

This study focuses on investigating the readiness of EFL lecturers who teach English in three universities in the Buleleng District in using Generative AI for planning and conducting teaching activities. The study is limited to lecturers' readiness, measured across the dimensions of technology self-efficacy, student interaction, and ethical awareness.

1.4 Research Questions

According to the problem identification, these are the research questions in this study:

1. What is the level of EFL lecturers' readiness at universities in Buleleng District to use Generative AI in the EFL classroom?
   a. How is the lecturers' readiness in terms of technology self-efficacy?
   b. How is the lecturers' readiness in terms of student interaction?
   c. How is the lecturers' readiness in terms of ethical awareness?

1.5 Research Objectives

Based on the research problem and questions the research objectives are separated into two.

1.5.1 General Objective

The general objective of this study is to investigate the readiness of EFL lecturers in the Buleleng District to use Generative AI for teaching English.

1.5.2 Specific Objective

The specific objectives of this study are to investigate the readiness level of EFL lecturers in the Buleleng District to use Generative AI in the EFL classroom, in terms of technology self-efficacy, student interaction, and ethical awareness.

1.6 Research Significance

There are two research significances of this research, including theoretical and empirical significances.

1.6.1 Theoretical Significance

Based on the gap where numerous lecturers are using Generative AI, but there is a limited study about lecturers' readiness in using it. This study aims to significantly enhance the understanding of lecturers' readiness to use Generative AI, particularly in the context of EFL higher education settings. Furthermore, the study is expected to broaden the scope of AI readiness research, as well as fill the gap in limited research.

1.6.2 Practical Significance

a) For EFL lecturers

For EFL lecturers, it is expected that the findings of this study can provide insights into the level of readiness among them to use Generative AI. Thus, by understanding it, they can improve their readiness. It is expected that they can make more effective use of AI in higher education.

b) For universities

The result of the study can support universities or higher educational institutions, particularly in the Buleleng District, in designing suitable professional development programs that address AI readiness. This can enhance the quality of higher education English instruction.

c) For future research

This study is expected to fill the body of knowledge in the related area of AI readiness. It will also open opportunities for future study to conduct comparative research or more research across regions and AI tools.