

# CHAPTER 1

## INTRODUCTION

### 1.1 Background of Study

The methods of teaching and learning have changed in Indonesia's educational system. This is a result of adjustments made to meet current demands. Planned and recreated educational system improvements that make greater use of technological advancements are created by educators, educational administrators, and educational institutions. Both educators and students require training and education to become used to the new educational system in consideration of the system's changes. Because of the covid-19, the learning system has changed to post-pandemic. Post-pandemic pedagogy refers to the adaptation of the educational system and student needs to the pandemic situation (Singh, J. et. al, 2021). Hybrid or blended learning is used for post-pandemic learning because this method is used in universities and schools to conduct scheduled and unscheduled class assignments in addition to face-to-face and virtual learning. To assist instructors and students in engaging in teaching and learning activities, hybrid learning requires technological media. This affected the learning in a positive way because the lecturers and students can find the most suitable media for learning English. According to Sutarto et al. (2020), students were fascinated by the concept of learning how to be adaptable and studying at home. Students came to the realization that they were dissatisfied with the learning process because it bored them, it is because felt overburdened by teachers' attempts to use apps to make learning much more enjoyable (Syauqi et al., 2020). Additionally, it led educators to determine the best

platform and method for teaching and learning post-pandemic (Trusr & Whalen, 2020). As a result, these issues have provided an opportunity to increase English teachers' and students' knowledge of emerging technology to identify the most effective media for enhancing English learning.

Different aspects of society are impacted by the extremely rapid growth of technology. It asserts that society and technology are interdependent (Selwyn, 2012). People rely on technology to adapt to life in the current period, even when it has certain negative effects on society. A significant factor underlying the global growth of society is digital technology. The growth of computing, the internet, and mobile devices has increased the societal impact of digital technology. The advancement of technology makes it possible to find innovative answers to society's problems in many different areas. Education is one of the fields that society feels has experienced innovation. The evolution of technology and information in the 21st century is forcing changes in education (Rotherham & Willingham, 2009). Teachers and students are forced by this transformation to strengthen their skills to meet the demands of the modern world. As they learn, the skills required for the modern world will be used to provide them with experience for their future lives and jobs (Chalkiadaki, 2018).

The advancement of technology has paved the way for the entrance of automation technology, which has significantly helped modern civilization because it is more efficient and profitable to automate a process than to carry it out manually (Susskind, 2020). Due to this circumstance, automation technology has advanced to the point where computer systems can imitate human intelligence through language processing and can complete tasks using the information gained. This

technology is known as Artificial Intelligence (Sumakul et al., 2022). Artificial Intelligence can be identified as a developed computer science branch known as the human-assistant machine.

The educational environment is now necessary to familiarize students with AI in the classroom because AI has grown to be a major policy agenda, particularly in English Language Teaching (ELT) (Tuomi, 2018). Replika, Cookie, Grammarly, Quillbot, Google Translate, and other AI tools have been invented in ELT. Grammarly is one of the artificial intelligence tools with a writing enhancement domain that is supported by an interconnected system that combines rules, development, and artificial intelligence techniques such as machine learning, deep learning, and natural language processing (Fitria, 2021a). Then there is Quillbot, a popular free paraphrasing tool. QuillBot provides artificial intelligence-powered paraphrasing products (Dale, 2020). The tool's operation is simple: Quillbot will rewrite the text of the written or pasted text by removing, adding, or changing words to create new sentences (Kinga & Gupta, 2021). Google Translation is also an AI tool in the field of machine translation. Users can perform translations by specifying the source and destination languages. Then, write the text in the original language, and Google Translate will translate it into the destination language automatically (Arsana & Julzarika, 2013). ChatGPT (Generative, Pre-trained, and Transformer) is one of the most advanced AI-powered chatbots. This technology enhances simple automatic tasks carried out by digital assistants like Siri and Alexa by automating recognition of speech and processing of natural languages (Kohnke, et al. 2023). ChatGPT is made to have conversations back and forth with users. ChatGPT encourages learning a language by simulating real-life interactions. It can determine

a word's meaning in relation to its context, explain grammatical errors, create texts of different genres (such as emails, stories, and recipes), create quizzes, annotate texts, and provide dictionary definitions, example sentences, and translations. These AI tools combine deep learning with a variety of natural language analysis approaches. In terms of the various layers of human language that can be analyzed and processed, these are individual characters and sentences, grammatical constructions, and sentences, including paragraphs or full text. According to Vygotsky (1986), AI can provide insights into individual students' talents, preferences, and learning styles.

Several AI studies have been done to determine teachers' and students' perceptions of the use of AI-based applications in the classroom. Sumakul et al (2022) found that all teachers and students mentioned the benefits of AI in the classroom, indicating a positive perception of AI-based applications. However, university students in the 2018-2019 academic year perceived a negative of the idea of AI-based applications (Keleş & Aydın, 2021a). The effectiveness of AI-based applications in the field of education is thought to be influenced by generational differences as well as these different perceptions. It might be different because everyone will perceive things differently, especially in a different environment.

Few researchers conducted this study because the research on AI-based applications in the context of learning is still new and promising, specifically regarding the perception of the use of AI-based applications. As a result, the researcher is motivated to conduct a study to investigate lecturers' and students' perceptions of AI-based applications in English post-pandemic learning. The study is conducted at English Language Education UNDIKSHA Singaraja because there

are very limited studies that investigate university lecturers' and students' perceptions of AI-based applications in post-pandemic learning in Indonesia specifically in Bali. The researcher observed the faculty of English Language Education at UNDIKSHA to identify the problem, which made it difficult for many students to learn English after the pandemic, especially when trying to access media like AI-based applications. Many students have only used AI-based applications with limited options, like voice assistants or recommendation systems. Even though English lecturers already recognize AI-based applications as promising possibilities to assist students in learning the language, the lecturers have yet to identify the best AI-based applications to use in order to enhance the English learning environment. Therefore, the research question in this study is to find out lecturers' and students' perceptions and affordances and challenges of

## **1.2 Identification of the Study**

The goal of AI-based applications is to create robots with intelligence on the same level as or even surpassing that of humans. Artificial intelligence in education (AIEd) is anticipated to be able to perform a variety of tasks for humans that will be easier, starting with natural language processing and moving on to perception, reasoning, moving, and manipulating objects, and knowledge (Fitria, 2021). By looking at the problems that the integration of AI must be adjusted against pedagogical competence, technological competence, and student motivation (Sumakul et al, 2022). This research is conducted to investigate lecturers' and students' perceptions of AI-based applications in post-pandemic learning experienced by EFL learners by researching a university in North Bali, namely English Language Education, Ganesha University of Education (UNDIKSHA).

Based on the result of the preliminary interview, the researcher identified some EFL lecturers and students with problems in English post-pandemic learning in English Language Education, UNDIKSHA, and found that students sometimes have difficulty understanding using AI-based applications in learning English. Meanwhile, the lecturers have difficulty implementing AI-based applications with suitable methods for teaching English learning. Therefore, from the identification of these problems, this research is conducted to investigate the lecturers and students' perceptions and examine the affordances and challenges of AI-based applications in post-pandemic learning. Moreover, with the implementation of AI-based applications in post-pandemic learning in English Language Education, UNDIKSHA, lecturers and students' perceptions will also be studied further to prepare for better learning.

### **1.3 Limitations of the Study**

To specify the discussion of the study, the aspects of the discussion are to investigate lecturers and students' perceptions and affordances and challenges of AI-based applications in post-pandemic learning at Universitas Pendidikan Ganesha, Buleleng, Bali, Indonesia which has EFL lecturers and students.

### **1.4 Research Question**

Based on the background of the study, the research questions this study are:

1. How do lecturers perceive AI-based applications in post-pandemic learning?
2. How do students perceive AI-based applications in post-pandemic learning?

3. What are the lecturers' affordances of using AI-based applications in English post-pandemic learning?
4. What are the lecturers' challenges of using AI-based applications in English post-pandemic learning?
5. What are the students' affordances of using AI-based applications in English post-pandemic learning?
6. What are the students' challenges of using AI-based applications in English post-pandemic learning?

### **1.5 Purpose of the Study**

1. To investigate lecturers and students' perception of AI-based applications in English post-pandemic learning.
2. To examine the affordances and challenges of AI-based applications for lecturers and students in English post-pandemic learning.

### **1.6 Scope of the Study**

The explanatory sequential mix-method is used in this study. The purpose of this study is to investigate lecturers' and students' perceptions AI-based applications, as well as the affordances and challenges in the English post-pandemic learning.

### **1.7 Significant of the Study**

This study has theoretical and practical implications for the readers, which can be summarized as follows:

### **1.5.1 Theoretical Significance**

This study is expected to advance English teaching knowledge regarding lecturers' and students' perceptions toward AI-Based Applications in the English post-pandemic learning.

### **1.5.2 Practical Significance**

#### **a. For the Lecturers**

Lecturers will be aware of the factors that support and inhibit the use of AI-based applications in the English post-pandemic learning for students. The findings of this AI research will be critical in determining the most appropriate and effective approaches and methods for their future learning activities.

#### **b. For Further Researchers**

The findings of this study can be used as preliminary data and information by future researchers conducting related research.

