

CHAPTER I

INTRODUCTION

1.1 Background of the Study

Ever since the covid-19 pandemic, there are quite a lot of things changed in an unexpected way, especially in the education field. In order to adapt to current demands, it has forced the system of education to consider new its teaching and learning methods. As a result, a lot of challenges are faced by educators, educational supervisors, and institutions to develop new approaches that the educational system had not previously adopted. Emergency Remote Teaching (ERT) are carried out due to the crisis caused by the covid-19 pandemic (Rapanta et al., 2020). There is a little similarity between ERT and online learning and teaching (OLT), they both require digital technology as a learning media because both of them are internet-based. The difference between them lies in the timeframe used. ERT is only used temporarily in emergencies that require quick action (Rapanta et al., 2020), while OLT is a learning system that uses a well-made learning design. Students and teachers have to undergo intriguing learning and training as a result of the system change. Singh et al. (2021) stated that the educational system readjusts to the needs of students and the pandemic situation is called a post-pandemic pedagogy. The learning system used in post-pandemic pedagogy is blended learning or hybrid. Many schools and universities has been using this method. Blended learning, also known as hybrid learning, enables students and teachers to carry out scheduled and independent classwork in addition to in-person and online learning (Singh, 2017).

The media used in blended learning needs technology that can help teachers and students in carrying out the learning activities. Technology plays an important role to do online learning in the post-pandemic pedagogy. (Ratheeswari, 2018) stated that Information and Communication Technology (ICT) focuses on communication technologies such as the internet, cell phones, wireless networks, and other tools of communication. ICT almost has the same

meaning as Information Technology (IT) but it is mainly focused with tools that help human work. The education system is quite aware of the importance of ICT. In obtaining better learning skills in the 21st-century, it is absolutely important to use ICT to support learning to be implemented effectively (Liesa-Orús et al., 2020). According to Tinio (2002), one of the examples of ICT used in learning activities is e-learning which uses web-based learning in sharing and achieving learning information. Raja et al. (2018) mentioned some impacts of ICT on education. First, learning can be more exciting and active because students learn based on real-life problems. Second, it can enhance collaborative and cooperative learning skills. Last, students can be more creative because they learn as independent learners who can develop their own learning strategies. In addition, teachers are also greatly impacted by the use of ICT. Teachers may expand their training needs because they are required to learn how to use technology in learning activities.

Technology, which has occasionally advanced quickly, has a real impact on many facets of society. Brey (2009) stated that technology is hard to define but people recognize what it is to society. Selwyn (2012) even mentioned that technology is society and vice versa. It means that both of them depend on each other. Despite many of its flaws, humans today rely on digital technologies to live broadly in the twenty-first century. For the past thirty-four years, digital technology has been credited with being a major factor in societal improvement all around the world (Selwyn, 2012, p. 1). Numerous analysts have classified digital technology as having a huge social impact due to the fast expansion of computing, the internet, and mobile technology in particular. It is possible to deal with some of society's most basic needs in all spheres by advancing technology. Education is one of the areas that has undergone such adjustments. The 21st century, as it is known, evolves and adjusts to the advancement of technology and information (Rotherham & Willingham, 2009). Because of this, both teachers and students must be able to develop their skills in order to meet modern needs. In order to better prepare students and give them experience for their future lives and jobs, new learning strategies and skills have emerged in the current era (Chalkiadaki, 2018). Students today focus on six areas:

development of character, citizenship, communication, critical thinking, collaboration, as well as creativity and imaginative thinking. The development of innovative and creative education, technology, and construction will enable the utilization of all these skills.

Technology has a significant impact on humans' daily lives. According to (Raja et al. 2018), technology significantly impacted every sector in the 21st century by making human work more efficient, quick, and simple. It can be noticed from the growth of information that is very fast and easy to access. The education field is feeling the positive impact of technology on learning. According to the most recent research, modern students are more inclined to use technology for learning Raja et al. (2018). This is because students nowadays choose engaging technology-based learning that is more interactive. As a result of the internet access, students heavily rely on technology. They are aware of the significance of the internet because everyone needs it. The usefulness of the internet helps students to get part of the information they need to advance their academic skills and knowledge. Another reason why modern students are interested in using technology to learn is that it provides visual images and videos that make learning more exciting. Visual projectors are one of the examples of visual technology that has been commonly used by teachers. It can motivate students to learn. Moreover, teachers can also deliver the learning materials more easily, effectively, and conveniently.

Technology development has made it possible for automation technology to appear, which has had a major impact on modern society because automating a task is more profitable and effective than doing it manually (Susskind, 2020). This situation prompted the development of automation technology in which Artificial intelligence (AI) is the ability of computer systems to simulate the intelligence of humans through the processing of language and complete tasks using all the data obtained. (Sumakul et al., 2022). It was initially defined by John McCarthy on his project two decades ago as tools that could help people by resolving issues and improving themselves. (McCarthy et al., 2006; Sumakul et al., 2022). According to Luckin et al. (2016), AI is difficult to establish because it depends on the industries it is used in,

including those of economy, psychology, education, and others. AI can be categorized as a cutting-edge subfield of computer science called human-assistant devices. (Sumakul et al., 2022).

In formal education, AI is known to have both beneficial and detrimental effects. Nevertheless, AI has emerged as a significant policy agenda, especially in English Language Teaching (ELT), which makes it necessary to introduce AI to students in the classroom (Tuomi, 2018). *Grammarly*, *Quillbot*, *Google Translate*, and *ChatGPT* are a few of the AI applications that ELT has developed. *Grammarly* is an interconnected system incorporating rules, development, and artificial intelligence methods like deep learning, machine learning, and natural language processing supports an AI application with a writing improvement domain. (Fitria, 2021a). The other AI application, *Quillbot*, is a quite popular free paraphrasing application. *QuillBot* offers a product that uses AI to paraphrase texts (Dale, 2020). The use of this application is very easy, *Quillbot* will produce new phrases by adding, deleting, or modifying words in text that has been written (Kinga & Gupta, 2021). Furthermore, *Google Translate* is also an AI application in the machine translation realm. By choosing the source language and the target language, users of this application are able to translate. The users can write text from the origin language, then *Google Translate* will automatically translate into the target language (Arsana & Julzarika, 2013). These artificial intelligence applications integrate deep learning with various approaches to natural language analysis. Human language can be analyzed and processed at several tiers, including individual characters and sentences, grammatical constructions and sentences, paragraphs or entire texts. In artificial intelligence, natural language processing entails understanding human language, then performing functions such as machine translation, emotion interpretation, essay scoring, and writing advancement. These AI applications show that many promising new technologies are emerging. Despite the various application difficulties and limitations of technology, regarding the plethora of new and mentioned possibilities to be able to resolve a number of persistent issues in education, it does not rule out the influence and possibilities provided by technology. The

excitement expressed by educators and students in the ELT realm because learning will be provided in a variety of settings. and emerge, many of which have been proven to be relevant. Shortly, AI can personalize learning experiences for each student by incorporating knowledge about their preferences, skills, and learning preferences.

In 2023, Artificial Intelligence is becoming more and more popular across a variety of industrial platforms, and chatbot technology is becoming crucial (Luo et al., 2019). It is a piece of software that carries out text-based online chat conversations using deep learning and Natural Language Processing (NLP) methods to communicate with humans (Dharani et al., 2020). In the current technological era, chatbots are the upcoming big thing. A chatbot is a computer program that improves and facilitates interactions. It has grown in popularity as a way to have conversations. Furthermore, the chatbot provides a variety of data about colleges, universities, and schools in addition to student-specific information (Patel et al., 2019).

The most recent Natural Language Processing (NLP) system, ChatGPT, was released on November 30, 2022 (Castelvecchi, 2022) by OpenAI, a non-profit research organization engaged in the development and direction of Artificial Intelligence. ChatGPT is software that predicts the following word or sentence in a conversation or a text command using generative language technology. Simply put, ChatGPT is a chatbot, a piece of software that mimics a virtual robot and can simulate human-to-human communication. Although it is still a prototype, this dialogue-based AI chatbot is thought to be capable of automatically responding to natural human language. Therefore, ChatGPT is very beneficial for students to do their work.

A number of AI studies have been carried out to learn how teachers and students feel about using AI in the classroom. Sumakul et al. (2022) discovered that each educator mentioned the benefits of artificial intelligence (AI) in learning, showing a positive perception of AI assistance in their research. Yet, the suitability of integrating AI in terms of educational and technological advances competencies, as well as student motivation, must still be considered. Sumakul et al. (2022b) conducted another study on students' views of the

application of AI in the classroom. The study's findings show that students have a favorable perception of the advantages offered, particularly in writing. Students stated that AI applications greatly helped them in detecting and correcting writing errors. Because studies on AI in the learning context are still new and promising, only several researchers conducted this study, which focused on the perception of AI use. Thus, the researcher conducts a study to investigate teachers' and students' perceptions toward the use of AI-based applications in the English post-pandemic learning especially in grade X and XI students at SMA Negeri 4 Singaraja.

1.2 Identification of the Study

AI and its automation elements are the next big thing in education. It has begun to spread into EFL classrooms and shows promise as a beneficial tool for both teachers and students. However, new demands and challenges also have been brought about by technological advancements. This can lead to the following questions: "Do students and teachers think that AI is easy to adapt?" "Do students and teachers face challenges when using AI-based applications?" "Is AI really helpful?" One way to provide the answers to the questions is to investigate how students and teachers perceive this issue. Students' and teachers' perceptions are important, this study wanted to see how students and teachers perceive the integration of AI in the English post-pandemic learning.

1.3 Limitation of the Study

To specify the discussion of the study, the aspects of the discussion are students' and teachers' perceptions of AI-based applications, as well as the affordances and challenges in grade X and XI at SMA Negeri 4 Singaraja in English post-pandemic learning.

1.4 Statements of the Problem

Regarding the background of the study, the statements of the problem of this study can be stated as follows:

1. How do the English teachers at SMA Negeri 4 Singaraja perceive AI-based applications in the English post-pandemic learning?
2. How do the students at SMA Negeri 4 Singaraja perceive AI-based applications in the English post-pandemic learning?
3. What are the English teachers' affordances of using AI-based applications in the English post-pandemic learning?
4. What are the English teachers' challenges of using AI-based applications in the English post-pandemic learning?
5. What are the students' affordances of using AI-based applications in the English post-pandemic learning?
6. What are the students' challenges of using AI-based applications in the English post-pandemic learning?

1.5 Purpose of the Study

According to the statements of the problem, the purposes of the study can be stated as follows:

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

1.6 Significance of the Study

The following are the theoretical and practical significances of this study for the readers:

1. Theoretical Significance

This study is expected to advance English teaching knowledge regarding teachers' and students' perceptions of AI-based applications in the English post-pandemic learning.

2. Practical Significance

a. For the Teachers

Teachers will gain knowledge how to perceive AI in ELT, as well as the affordances and challenges of using AI-based applications in the English post-pandemic learning for students. The findings of this AI research will play a significant factor 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.

