

# CHAPTER I

## INTRODUCTION

This chapter discusses the introduction to the study, which includes the research background, problem identification, research questions, research objectives, and research scope. The researcher will go into EFL students' speaking abilities and how technology can help in this chapter. Next, the e-portfolio is a language learning tool that primarily benefits from peer and teacher feedback. Additionally, the researcher discusses student self-efficacy and feedback that can be given through the use of generative AI.

### 1.1 Research Background

One of the abilities that students must acquire is speaking, and it is important for an EFL to continuously develop good speaking skills (Sanjaya et al., 2024). Speaking is a skill that involves several different elements, including the speaker's knowledge, physical abilities, and cognitive abilities in a quick and real-time as defined by Burns (2019), which will indicate the speaking performance of an individual. Students need to learn a number of components in order to become effective speakers, such as comprehension during communication, grammar or the arrangement of words in speaking, fluency and pronunciation, which is the clarity of word articulation, and vocabulary, which describes the words that pupils own and employ in conversation (Harmer, 2007). However, since they are not exposed to situations that motivate them to talk in the target language, EFL students frequently struggle to improve their speaking abilities (Chen et al., 2021).

However, with the rapid development of technology in the 21st century, it can provide assistance in learning English, especially in speaking skills. Therefore, the development of technology should be utilized in helping to improve students' speaking skills. Some forms of technology such as the internet, podcasts, and videos can be used as tools to help with English language

learning (Sosas, 2021). This technological development allows for the implementation of many types of technology in education. Unlike conventional teaching methods, teaching methods that utilize technology make learning more creative and innovative. For example, students who tend to lack confidence in public speaking can use technological devices to learn by creating videos and submitting them directly to their teachers (Nguyen & Pham, 2022). With the abundance of technology available today, both teachers and students are greatly assisted in their learning.

Among the various media available today, the most popular is video blogs or vlogs (Sanjaya et al., 2024). Teachers can create teaching materials according to their context through vlogs, and students can learn through videos, which is very different from traditional teaching methods. Through videos, students can learn how language is used spontaneously, naturally, and as an authentic learning resource (Syaputra & Nurwita, 2024), where students are exposed to help them understand not only the use of language but also intonation, expression, and body language to create effective communication (Binmahboob, 2020). Besides vlogs from teachers, students can also learn through various videos available on the internet. Social media, as one form of the internet, has a vast number of English video blogs such as tutorials, daily life, traveling, and education, which can be found on various social media platforms like Instagram, YouTube, and TikTok (Sanjaya et al., 2024).

By collaborating to share innovative and creative ideas that are published online as a kind of 21st-century skill, social media use in education can inspire students and boost their involvement in the learning process (Agustina & Usman, 2024). According to Prayoga et al. (2024), since Instagram allows users to post images or videos to demonstrate their speaking skills, it can be used as a teaching tool. Additionally, the findings also revealed that creating English video content on Instagram can improve students' speaking abilities.

Furthermore, there is TikTok, which positively enhances students' vocabulary with an enjoyable learning experience (Alshreef & Khadawardi,

2023). YouTube is another social media site that can help with learning, in addition to Instagram and TikTok. YouTube can motivate students to continuously improve their pronunciation by regularly reviewing the vlogs they have created and seeing comments from others or their peers as feedback (Syaputra & Nurwita, 2024).

Social media integration in education is highly helpful for both teachers and students. Teachers can submit their vlogs there, and students can gather all of their work as a record of their accomplishments or learning objectives. A portfolio is an assortment of student learning materials that show the process, efforts, growth, and accomplishments of students in an area of study (Chen & Mazow, 2002). However, with the use of technology, a collection of their artwork and thoughts collected digitally is now called an electronic portfolio (Huang & Hung, 2010). Portfolios are usually used by artists, actors, dancers and other performers to showcase their skills (Georgi & Crowe, 1998). As time progresses, portfolios are finally being used in education. There are six benefits of portfolios according to Barton (1993), namely 1) empowerment, with student-centred learning; 2) collaboration, where students discuss with friends and educators; 3) integration, hands-on learning; 4) explicitness, development of student portfolios; 5) authenticity, student work that really happens; 6) critical thinking, which provides opportunities for reflection. E-portfolios facilitate students to store their work in various forms of writing, images, audio, and video (Fiedler & Pick, 2004). Prior to electronic portfolios, paper portfolios have been used, however, the weakness of these traditional portfolios is that the format is only limited to writing on paper (Gok & Ayaz, 2021). In addition, the weakness of traditional portfolios is also in the storage area which requires a lot of space and good management so that these documents are not lost (Georgi & Crowe, 1998). Now, with the advantages of e-portfolios, these weaknesses can be overcome. The advantages of e-portfolios include easy maintenance of management in e-portfolios, storage, namely e-portfolio digital leadership space, accessibility, access to reach works to everyone (Barrett, 2000).

From these advantages, integrating e-portfolio is an effective medium in assisting teaching. Huang and Hung (2010) in their study have provided an overview of how to implement e-portfolio on students' speaking skills. In the initial stage, students will be introduced to the application they will use and the teacher will provide how to use it. Then students will compile their e-portfolio starting with making an introduction first. In the following weeks, students will create audio or other format files about their opinions on a topic. Students will also upload the video to their e-portfolio page and in between students will also visit their friends' works and provide comments as a form of feedback. Then, students will also fill out a questionnaire regarding their perceptions of the e-portfolio and the interview. Based on the implementation method and following up on the advantages of e-portfolios, particularly accessibility, teachers will be able to see students' skill development over time (Cohen, 2005) and facilitate the assessment of students' performance (Hubert et al., 2015). Additionally, feedback is essential in e-portfolios where self-assessment and peer-assessment are present.

The resources provided by e-portfolios, such as the ability for students to organize and manage their work in various file formats, will increase the effectiveness of learning English, particularly when speaking. The capacity to speak is a crucial skill that EFL students must acquire. However, in Indonesia, students' speaking skills are difficult to develop due to a lack of exposure from the environment (Sanjaya et al., 2024), necessitating extra effort to enhance students' abilities. In addressing this issue, e-portfolios can help students store their speaking ability works (Matra & Rukmini, 2017). In addition, e-portfolios will also facilitate student assessments through evaluations by teachers, peers, and others outside the school institution (Yastibas & Yastibas, 2015). Through these assessments, students will also receive feedback and engage in self-reflection (Kusuma et al., 2021).

With the feedback from students, it means that students are involved in the learning process (Mínguez et al., 2020). Feedback is information received by the creator from an observer (Hattie & Timperley, 2007). Peer feedback is a

form of formative feedback or assessment (Biggs & Tang, 2011) and includes points of evaluation where students need to improve (Winstone & Carless, 2020). As the world and technology evolve, feedback can now be provided not only by humans. Artificial Intelligence (AI) can also facilitate this. In simple terms, AI is a computer system with human-like capabilities (Holmes & Tuomi, 2022). Aristeidou et al. (2017) state that AI can facilitate feedback and support for students. Additionally, Campos (2025) states that AI can provide specific feedback on student products, leading to academic improvement, and this feedback can be given anywhere, not limited to school hours. Furthermore, AI with human intelligence and big data processing enables feedback to be provided quickly with excellent results (Dai, 2023).

Due to a lack of self-confidence, EFL students frequently experience nervousness when speaking English. This has an effect on pupils' self-efficacy, or their belief in their capacity to complete a task (Bandura, 1977). The extent to which students will make efforts to carry out tasks, emotions, actions, and thoughts will influence students' self-efficacy (Almohammadi, 2023). If students have high self-efficacy, then their academic results will also improve (Honicke & Broadbent, 2016).

Bandura (1977) states that there are four sources of student self-efficacy, including mastery experiences, vicarious experiences, social persuasion, and emotional and physical states. Experiencing success in something will make students more confident and increase their self-efficacy. Furthermore, self-efficacy may rise or fall as a result of peer observation. Then, the encouragement from the environment will affect students' self-efficacy, and their physical and emotional conditions will also have an impact. So, self-efficacy can be maintained and enhanced by many factors (Celik et al., 2025). This anxiety about speaking can be reduced by using an e-portfolio (Huang & Hung, 2010).

## 1.2 Problem Identification

Prior research has demonstrated that EFL students struggle with speaking (Khan et al., 2018; Al-Jamal, 2014; Sirisrimangkorn, 2021). Since e-portfolios can enhance vocabulary and pronunciation, they have been used by a number of researchers as a solution to this problem. The study found that e-portfolios promoted speaking skills. According to Pratiwi et al. (2022), TikTok can help students become more proficient speakers because of its numerous intriguing features, the fact that students don't have to face an audience directly, which gives them more confidence, and the concept that TikTok is an e-portfolio. Accordingly, Aliyudin et al. (2021) discovered the same thing in their study and added that e-portfolios enable students to recognize their errors and make corrections over time so they can observe how their skills are developing.

However, researchers also discovered another problem with students' attitudes, namely their lack of confidence when speaking English, which lowers their self-efficacy (Darmawan, 2021; Indrianty, 2016; Maulana, 2016; Suryani & Argawati, 2018). Students' academic performance and language competence will be impacted by the decrease in their self-efficacy (Alawiyah, 2018; Liu & Zhou, 2024). Therefore, integrating e-portfolios into instruction could be a way for teachers to deal with this problem. Kusuma and Waluyo (2023) performed research on the effect of e-portfolios on students' self-efficacy and found that the deployment of e-portfolios boosted students' self-efficacy because of engaging activities and peer feedback. Furthermore, López-Crespo et al. (2021) also conducted a study on this, which showed positive results similar to the previous research and also stated that students' self-efficacy increased when they successfully completed tasks or achieved success in an action, in accordance with Bandura's theory of mastery experiences.

Feedback is an important point found in an e-portfolio. Students will receive and provide feedback to their peers or others. This feedback will be useful for students to reflect on themselves and then develop their speaking skills. Zheng and Barrot (2022) in their research found that e-portfolios can

enhance students' speaking skills through feedback activities where students can see their shortcomings and weaknesses. However, as technology advances, the integration of Artificial Intelligence (AI) with e-portfolios also has the potential to provide feedback. Several researchers have studied AI in English language acquisition, including Liando et al. (2025), who found in their study that AI can significantly assist teachers' work, such as meeting students' needs, including feedback, improving material mastery, and developing more creative learning methods.

Based on the explanations and research, this issue also occurs among students at Ganesha University of Education. In the initial observation, it was found that students had issues with their speaking skills. This is because most of them have just started learning and using English orally at the higher education level. This condition affects the low confidence of students in speaking, making it important to assess their level of self-efficacy in English speaking skills. In addition, an innovative teaching strategy is needed. As the world progresses, the combination of e-portfolio and AI can bring a new strategy to support students' speaking skills and self-efficacy, where AI can provide personalized feedback to the students. Therefore, the purpose of this study is to examine the effectiveness of the implementation of e-portfolios combined with AI as a feedback provider compared to conventional peer feedback in enhancing students' speaking skills and self-efficacy. However, so far there has been no research on this matter.

The use of technology in education is becoming widespread due to technological advancements. In line with that, teachers in Indonesia have a high interest in using e-portfolios (Taufik & Cahyono, 2019; Alfianti & Aminim, 2022; Subiana, 2022). In addition, the interest in using AI for English in Indonesia is also high (Rafida et al., 2024; Rahman, 2024; Ahn et al., 2025). However, the literature on the integration of e-portfolios with AI remains unclear. Therefore, it is important to determine the extent to which e-portfolios and AI can facilitate students' self-efficacy in English speaking skills. With this

research, it is expected that a deeper understanding will be found and it will contribute to the literature.

### **1.3 Research Limitation**

The scope of this research "Investigating the effect of e-portfolio combined with AI on EFL students' self-efficacy toward speaking skills" is second-semester students at Ganesha University of Education.

### **1.4 Research Question**

The researcher presents a number of research questions in light of the previous statement:

1. Is there any significant effect of e-portfolios combined with AI on EFL students' self-efficacy?
2. Is there any significant effect of e-portfolios combined with AI on EFL students' speaking performance?
3. Is there any significant effect of e-portfolio combined with AI on EFL students' self-efficacy and speaking performance simultaneously?

### **1.5 Research Objective**

Following a background, problem identification, research limitations, and research questions, the study's objectives are:

1. Investigating the effect of e-portfolios combined with artificial intelligence (AI) toward EFL students' self-efficacy
2. Investigating the effect of e-portfolios combined with artificial intelligence (AI) toward EFL students' speaking performance
3. Investigating the effect of e-portfolios combined with artificial intelligence (AI) toward EFL students' self-efficacy and speaking performance simultaneously

## 1.6 Research Significances

### 1.6.1. Theoretical

The researchers hope that this study will add to the body of information about the potential use of e-portfolios combined with AI to increase students' self-efficacy in their ability to speak English.

### 1.6.2. Practical

(a) For teachers

This study encourages teachers to incorporate innovative methods of instruction into their lesson plans by offering insights into how technology and e-portfolios could improve students' self-efficacy.

(b) For students

Students have new and fascinating ways to study English through the combination of e-portfolios and AI, especially when it concerns enhancing speaking and self-efficacy.

(c) For Other Researchers

This study provides baseline data and a reference for future research on the influence of e-portfolios with AI on students' self-efficacy in a technology-based learning environment and their efficacy as a learning method.