

CHAPTER I

INTRODUCTION

1.1 Research Background

In the 21st century, the integration of technology into education has become an unavoidable reality, as emphasized by Archer and Sterling (2024). Education is no longer confined to traditional classroom settings but is increasingly shaped by digital innovations that enhance both teaching and learning. The rapid advancement of digital technology has significantly transformed various aspects of human life, including education, communication, and the workplace. Within the educational sphere, this digital transformation plays a pivotal role in developing quality human resources that can adapt to global challenges. Among the many technological innovations that have emerged in recent years, Artificial Intelligence (AI) has stood out as one of the most influential. As noted by Zou et al. (2025), digital technologies, especially AI, have contributed to creating more accessible, engaging, and personalized learning environments, addressing the growing need for flexible and adaptive education in the digital era.

Artificial intelligence describes machines built to mimic human intelligence, capable of learning, reasoning, and adjusting to new situations (Ocaña-Fernández et al., 2019). Within education specifically, AI takes on a central role in tailoring learning experiences to individual students, automating routine tasks, and strengthening teaching methods through intelligent tutoring systems. ChatGPT, built by OpenAI, stands out as one notable AI application in language learning: it functions as an AI-powered chatbot capable of holding natural-language

conversations with users, offering real-time feedback on grammar, vocabulary, and writing, which makes it a genuinely useful tool for English as a Foreign Language (EFL) education (Koraishi, 2023; Hossain & Younus, 2025).

That said, getting real value out of ChatGPT in formal learning settings takes more than just having the tool available; it also hinges on whether students are ready to adopt and use it in a meaningful way. Within educational technology, readiness describes how well-prepared learners are, technically, cognitively, and behaviorally, to work with new tools effectively, a preparation that spans several dimensions: digital literacy, access to the necessary technological infrastructure, psychological confidence, and awareness of ethical use (Parasuraman, 2000; Aydin & Tasci, 2005). Without these pieces in place, students risk not benefiting fully from ChatGPT, or even misusing it in ways that lead to over-reliance on AI, weakened critical thinking, or unethical handling of generated content. Assessing readiness, then, becomes an essential step before bringing AI-based tools into language learning settings.

Classroom observations at SMA Negeri 1 Gerokgak indicate that both teachers and students are already familiar with using ChatGPT, particularly to help complete assignments and to search for or create learning media. ChatGPT has been utilized to assist students in completing language-related tasks, while teachers have used it to support the preparation of instructional materials, both during and outside classroom instruction.

Several studies have examined readiness or acceptance related to ChatGPT in different educational settings. Bin and Halim (2023), for instance, investigated the readiness of community college students in Malaysia to adapt ChatGPT for

learning purposes, focusing on factors such as knowledge, willingness, and concern within a Theory of Planned Behavior framework. In a different context, Rahimi and Sevilla-Pavón (2024) explored ChatGPT readiness among university language teachers, finding that greater readiness was associated with more innovative teaching practices. Meanwhile, Conrad and Nuebel (2025) reported that although secondary school learners were generally familiar with ChatGPT, its integration into formal academic learning remained limited across educational contexts.

While these studies provide valuable insights into ChatGPT readiness, they reveal a gap in the literature: existing research has largely focused on higher education or teachers, applying general acceptance models such as TPB, rather than examining EFL secondary school students' readiness through a structured, education-specific framework. Few studies, if any, have investigated this issue using the RAIS model, particularly within the Indonesian EFL secondary school context. Given that ChatGPT is already being used informally by both teachers and students at SMA Negeri 1 Gerokgak, this study aims to survey how ready EFL students are to use ChatGPT in English learning, measured through the RAIS model.

To assess this readiness, the present study adopts the Readiness for Artificial Intelligence in Education Scale (RAIS) model proposed by Ramazanoglu and Akin (2024), which focuses on three critical dimensions: Technology Self-Efficacy, Student Interaction, and Ethical Awareness. Although the RAIS model was originally developed and validated for measuring teachers' AI readiness, its three dimensions are conceptually applicable to learners as well, as they capture general aspects of technological, social, and ethical preparedness relevant to any user of AI

tools in educational settings. Therefore, this study adapts the RAIS framework to assess EFL students' readiness to use ChatGPT. This model differs from general technology readiness frameworks such as the Technology Readiness Index (TRI) proposed by Parasuraman (2000), which measures readiness through four broader psychological dimensions: optimism and innovativeness as positive drivers, and discomfort and insecurity as inhibiting factors. While TRI captures a general disposition toward technology adoption across contexts, RAIS was specifically designed for AI-based learning environments, emphasizing not only technical confidence but also social interaction and ethical considerations relevant to educational settings. This education-specific focus makes RAIS a more suitable framework for evaluating EFL students' readiness to use ChatGPT in this study.

This research involves students from grades X, XI, and XII at SMA Negeri 1 Gerokgak to capture readiness across different academic levels. This school was chosen because it represents a context where digital technology is gradually being introduced, yet AI integration has not been fully realized. Understanding students' readiness in this setting is crucial for ensuring equitable and effective adoption of ChatGPT in formal learning.

In light of these considerations, this study aims to investigate the readiness of EFL students at SMA Negeri 1 Gerokgak to adopt ChatGPT in their English language learning. By applying the RAIS model, the research seeks to provide insights for teachers, school leaders, and policymakers in designing AI-integrated learning environments that are effective, inclusive, and ethically responsible.

1.2 Problem Identification

Despite the rapid advancement of AI technologies such as ChatGPT and their growing potential in educational settings, there remains a significant gap in understanding how prepared high school students are to effectively use these tools in their learning processes. While ChatGPT offers numerous benefits for EFL learners, including personalized feedback, language practice, and idea generation, its successful integration depends heavily on students' readiness across multiple dimensions.

Although ChatGPT has been formally used in English language learning and both teachers and students are familiar with its use, there is still limited empirical evidence measuring the readiness of high school students to use ChatGPT effectively, responsibly, and ethically, particularly within the RAIS framework. Furthermore, it remains unclear whether students' readiness levels differ across Grades X, XI, and XII.

Although the use of ChatGPT among students has become increasingly prevalent, its integration into EFL learning has not been fully examined from the perspective of students' readiness. At SMA Negeri 1 Gerokgak, students come from different grade levels (X, XI, and XII), which influences their levels of readiness to use ChatGPT due to variations in learning experiences, technological familiarity, and academic maturity. Nevertheless, empirical evidence that examines the extent to which EFL students are ready to use ChatGPT effectively, interactively, and ethically in English learning remains limited. In particular, students' readiness in terms of technology self-efficacy, interaction with peers, and ethical awareness has not been clearly identified, including whether significant differences in readiness

levels exist across grade levels. Therefore, a systematic study is required to examine EFL students' readiness to use ChatGPT in English learning and to identify differences in readiness based on grade levels.

Moreover, there is limited empirical data on the readiness of Indonesian high school students to integrate AI technologies into formal education, with most existing research focusing on university students or pre-service teachers. This lack of data hinders educators and policymakers at the high school level from making informed decisions about how to implement ChatGPT effectively and responsibly.

Therefore, this study seeks to identify and analyze the readiness of EFL students at SMA Negeri 1 Gerokgak to use ChatGPT in their English learning. By addressing these challenges, the study aims to provide evidence-based recommendations that support inclusive, ethical, and effective AI integration in secondary education.

1.3 Limitation of The Study

This study is limited to examining the readiness of EFL students at SMA Negeri 1 Gerokgak to use ChatGPT in English language learning. The scope of the research focuses on students from grades X, XI, and XII in the academic year 2024/2025, while English teachers are not included as participants, as the study emphasizes students' perspectives. This research is grounded in the finding that both teachers and students at SMA Negeri 1 Gerokgak have experience using ChatGPT to support the English learning process, particularly in completing learning tasks such as understanding texts, generating ideas, and facilitating classroom activities. Despite the implementation of ChatGPT in English learning, no prior research has been conducted at SMA Negeri 1 Gerokgak to analyze or survey students' readiness to

use ChatGPT in English language instruction. Therefore, this study specifically addresses the extent to which students are prepared to use ChatGPT in classroom-based EFL activities. The study does not examine the actual implementation of ChatGPT or measure its impact on learning outcomes. While the Technology Readiness Index (TRI) is commonly used to evaluate technology adoption in general contexts, this research employs the Readiness for Artificial Intelligence Application Scale (RAIS) to assess students' readiness through three key dimensions: Technology Self-Efficacy, Student Interaction, and Ethical Awareness. This model is considered more aligned with the educational objectives of the study and the psychological factors relevant to high school students' use of ChatGPT in English learning. Furthermore, the study is limited to descriptive quantitative analysis and does not incorporate qualitative or mixed-method approaches due to methodological constraints.

1.4 Research Questions

Drawing on the background outlined above, this study addresses the following research problems:

1. What is the overall level of readiness of EFL students at SMA Negeri 1 Gerokgak to use ChatGPT in English language learning?
2. Are there any differences in the readiness levels among EFL students of grades X, XI, and XII at SMA Negeri 1 Gerokgak?

1.5 Research Objectives

Based on the research problems outlined previously, the objectives of this study are as follows:

1. Identify the overall readiness level of EFL students at SMA Negeri 1 Gerokgak to use ChatGPT in English language learning.
2. Compare the readiness levels of EFL students across grades X, XI, and XII at SMA Negeri 1 Gerokgak.

1.6 Significance of The Study

Broadly speaking, this study offers two anticipated research significances, namely:

1.6.1 Theoretical Significance

This study is expected to contribute to the growing body of knowledge regarding the integration of Artificial Intelligence (AI) tools, specifically ChatGPT, in EFL education. By focusing on student readiness, this research adds to the theoretical framework surrounding digital literacy, technology acceptance, and AI-assisted language learning at the secondary education level. The results may serve as a reference for future studies examining the adoption of AI-based educational tools in similar contexts.

1.6.2 Practical Significance

This study is anticipated to generate knowledge development in a better path, particularly in the creation of the authentic assessment rubric.

a. For School

This research offers schools valuable insights into students' readiness to use AI tools like ChatGPT for English language learning. The findings can inform school leaders and policymakers about the existing digital competencies and challenges faced by students, helping guide decisions related to infrastructure investment, internet access, digital

training programs, and curriculum planning. With a clearer understanding of student readiness, schools can better prepare for effective and ethical AI integration, ensuring that all students are included in the digital transformation process.

b. For Students

This study directly benefits students by identifying their strengths and gaps in readiness for using ChatGPT as a language learning aid. By highlighting their levels of technological access, digital competence, psychological confidence, and educational understanding, the results can help inform support programs that empower students to use AI responsibly and effectively. This, in turn, enhances the quality of their English learning experience and equips them with critical digital literacy skills needed for academic and real-world success.

c. For Other Researchers

Later, this study will serve as a guide for other researchers who do comparable studies involving creating authentic assessment rubrics.