

CHAPTER I

INTRODUCTION

1.1 Background of the Study

The result of over fifty years of artificial intelligence evolution, the emergence of Generative Artificial Intelligence (GenAI) is the most significant technological advancement in recent decades (He et al., 2025). Simply put, GenAI is a set of algorithms or programs capable of creating content such as text, images, audio, and even code, with results that resemble human work (He et al., 2025; Kalota, 2024). Since ChatGPT was released at the end of 2022 (Kalota, 2024), this technology has become extremely popular worldwide and is rapidly being adopted by various industries (Monib et al., 2024). According to (Government & Paper, 2024), GenAI is considered a "tipping-point technology" with the potential to transform how things work and productivity. This also applies in the world of higher education, where almost every discussion now addresses how GenAI can impact teaching and learning (Ka et al., 2024).

ChatGPT, owned by OpenAI, and Gemini, owned by Google, are two major GenAI platforms popular among students. Each has advantages that influence user choice (Al Islam, 2025). ChatGPT is often considered superior because it can provide detailed feedback and make it easy to revise writing (Alpar, 2025). Conversely, Gemini is known for its multimodal capabilities, which allow it to process various inputs, including images,

audio, and text, as well as its ability to access information in real-time (Imran & Almusharraf, 2024). Even in terms of writing stages, student preferences can change. A study by (Alpar, 2025) showed that Gemini is preferred for brainstorming and outlining needs, but they also choose ChatGPT when they need feedback.

However, the rapid integration of these two platforms has also sparked fierce debate (Monib et al., 2024) and raised a number of new issues that require serious attention. Academic integrity is a major concern for educators. (Durmu, 2024) conducted an analysis that identified plagiarism as the greatest threat from using GenAI. This finding aligns with the research by (Setyaningsih, 2025), which also highlights issues of information reliability and the potential for students to become overly reliant on this technology. Due to these concerns, the use of GenAI in academia, especially in potentially harmful tasks like writing thesis, needs further investigation.

The adoption of GenAI is a highly relevant phenomenon in Indonesia, where its use has become an academic habit. According to research by (Ridwana, 2025), 90.6% of respondents stated that they use AI daily or several times a week. This indicates high student engagement. This supports the findings of Salmi & Setiyanti (2023) that students have a positive view of AI as a tool that can be used to improve task efficiency. However, there are significant concerns behind this massive adoption. (Ridwana, 2025) found that "concern about its impact on education" was the biggest

challenge perceived by students. 87.5% of respondents stated the same. The issue of excessive dependence, which was also discussed by (Setyaningsih, 2025) for English students, aligns with this concern. The tension between high usage and widespread concern highlights the urgency of understanding how students navigate GenAI tool choices in the thesis writing process in Indonesia. To deeply understand these choices, it is crucial to evaluate the students' perceptions regarding the perceived usefulness and perceived ease of use of each platform, as well as the specific strengths and weaknesses they encounter in practice.

Although a number of studies have emphasized the role of GenAI in education globally and locally (Almassaad, 2024; Ridwana, 2025), there are still significant research gaps that need to be filled. International comparative studies, such as those conducted by (Al Islam, 2025) and (Alpar, 2025), have provided initial insights into the differences between Gemini and ChatGPT. However, the context remains limited to general academic tasks or short essays, rather than the long and complex process of writing a thesis. Conversely, relevant research in Indonesia, such as that conducted by (Setyaningsih, 2025), often focuses on only one platform (ChatGPT) and a specific stage, such as editing, without directly comparing it to Gemini. Therefore, there has been no research specifically examining Gemini and ChatGPT from the perspective of Indonesian English language education students, considering the entire thesis writing process. This study aims to fill this gap by providing a better understanding of how students

find, select, and perceive both AI assistants to complete their important academic tasks.

1.2 Problem Identification

Based on the background of the problem outlined above, several issues can be identified as follows:

1. The increasing use of generative AI assistants like Gemini and ChatGPT by students in the thesis writing process without a deep understanding of the specific Perceived Usefulness, Perceived Ease of Use, and the strengths and weaknesses of each platform as an AI thesis writing assistant.
2. The lack of comparative analysis research specifically comparing students' perceptions of Gemini and ChatGPT, especially for long-term and complex academic tasks like thesis writing.

1.3 Research Limitations

To ensure this research is more focused, directed, and in-depth, the researcher has set the following limitations:

1. Platform AI: This research will only focus on comparing perceptions of two generative AI platforms, namely Gemini and ChatGPT. Other generative AI assistants will not be included in the analysis of this study.
2. Research Subjects: The research subjects for this study are specifically limited to recent graduates from the English Language Education Study Program at the Maritime University of Raja Ali

Haji (UMRAH), who have experience completing the entire thesis writing process. This study does not include students from other study programs or universities.

3. Research Context: The context of AI use analyzed is limited to the entire thesis writing process. This study will not address perceptions of AI use for other general academic tasks, such as creating weekly papers, essays, or presentations.
4. The focus of the analysis is limited to the comparative perceptions of students regarding the utilization of the two AI platforms (Gemini and ChatGPT) and does not measure the direct impact of AI on the quality of theses (such as final grades or objective grammar scores).

1.4 Research Question

Based on the established problem limitations, the research questions in this study are formulated as follows :

How does Gemini Ai compare to ChatGPT as Ai assistant in supporting Thesis writing process?

1.5 Research Objectives

In line with the problem formulation previously outlined, the objectives of this research are as follows:

To compare the perceptions of recent graduates from the English Language Education Study Program at Universitas Maritim Raja Ali Haji regarding the usefulness, ease of use, and the specific strengths and

weaknesses of Gemini compared to ChatGPT as AI assistants in supporting the entire thesis writing process.

1.6 Benefits of the Research

The results of this research are expected to benefit various stakeholders, both theoretically and practically.

1.6.1 Theoretical Benefits

Theoretically, this research is expected to contribute to the body of knowledge, particularly in the study of Generative AI in education. This research will fill a gap in the literature by providing empirical data on the comparison of perceptions between Gemini and ChatGPT in the context of thesis writing within the English Language Education environment in Indonesia, an area that has not been extensively explored to date.

1.6.2 Practical Benefits

Practically, the results of this research are expected to be beneficial for the following parties :

- For Students: The results of this research can serve as a guide for students, particularly those in the English Language Education Department, in using AI assistants more strategically and effectively. By understanding the specific strengths and weaknesses of Gemini and ChatGPT for each stage of thesis writing, students can make

better decisions about which tool to use to maximize their productivity and the quality of their work.

- For Lecturers and Educational Institutions: This research can provide relevant evidence-based data for supervising lecturers and program study managers. The findings regarding student perceptions and preferences can serve as a basis for developing clearer institutional guidelines or policies on the ethical and responsible use of AI in the thesis guidance process.
- For Future Researchers: This research can serve as a basic reference and starting point for other researchers interested in conducting similar studies. The findings of this research can be used as comparative data for studies at different universities or study programs in Indonesia, and also open opportunities for further exploration of other aspects of student interaction with generative AI.

1.7 Key Terms

1. Perception

Perception in the context of this research refers to the cognitive process by which research subjects (recent graduates) interpret, understand, and make subjective judgments about their experiences using Gemini and ChatGPT. This perception encompasses their views on the usefulness, ease of use, and the

strengths and weaknesses of both platforms as tools to assist in the thesis writing process.

2. Generative AI (GenAI)

Generative AI is a subfield of Artificial Intelligence that refers to a set of algorithms or programs capable of creating text, images, audio, and even computer code, with results that resemble human work. In this study, the focus of GenAI is on two leading Large Language Models (LLMs) platforms, namely ChatGPT from OpenAI and Gemini from Google, which serve as AI assistants to help students with writing assignments.

3. ChatGPT

ChatGPT is a generative AI assistant based on a Large Language Model (LLM) developed by OpenAI. This platform is known for its ability to generate human-like text and engage in coherent conversations. In this study, ChatGPT was evaluated from the perspective of student perceptions, particularly regarding its ability to provide detailed and actionable feedback on academic writing drafts.

4. Gemini

Gemini is a multimodal generative AI assistant developed by Google. Its main advantage lies in its ability to understand and process various types of input, including text, images, and audio, as well as its potential to access information in real-time thru Google

Search. In this study, Gemini was evaluated from the perspective of student perceptions, specifically regarding its role in pre-writing stages such as brainstorming (idea generation) and outlining (creating a writing framework).

5. Thesis writing process

The process of writing a thesis in this study is defined as the entire series of academic activities undertaken by students to produce a final scientific paper as a graduation requirement. This process encompasses various stages, from the pre-writing phase (idea and topic generation), literature review compilation, methodology design, data analysis, to the post-writing phase (editing, proofreading, and revision).

