

CHAPTER I

INTRODUCTION

This chapter provides the foundation of the study by presenting the background and core issues related to students' writing skill, particularly in the context of SMA Negeri 1 Ngimbang. This chapter outlines the research question, objective, significance, scope, limitations, and key terms that guide the overall direction of the study.

A. Background of The Study

English is one of the most essential subjects in Indonesian senior high schools because it supports students' communication, academic development, and global literacy. Achieving coherence in idea organization is often what makes writing so challenging as a productive skill, because students cannot just rely on grammar and vocabulary alone. For senior high school students, proficiency in writing is crucial for expressing thoughts and describing the world around them. However, many students find writing daunting because it demands a high level of linguistic accuracy and creative thought.

During field observations and informal chats with students at SMA Negeri 1 Ngimbang, it became clear that putting thoughts into written English remains a major hurdle for many learners. Even though some students initially pointed to grammar or speaking as their main difficulties, deeper conversations showed that the real struggle lies in a lack of structured guidance when they actually try to write. They usually know what they want to express but simply get stuck on how to do it. This shows up clearly in their trouble with recalling

vocabulary, building correct sentences, and keeping paragraphs coherent—proving that there is a real need for more innovative instructional materials.

Furthermore, although 97.8% of students regularly use digital tools, such as Google, YouTube, and translation applications, their use of technology remains passive and fragmented. Students typically use these tools for quick translations rather than for understanding how to construct a well-structured text. Meanwhile, only 33.3% of students feel that classroom learning is consistently engaging. This gap shows that while students are tech-savvy, they have not been provided with structured, AI-enhanced materials that can guide them step-by-step in the writing process.

A study by Baskara (2025) explored the pedagogical efficacy of ChatGPT and Google Gemini among EFL learners, finding that these models enhance active learning through contextual support. Gemini AI, in particular, excels in generating structured examples and multilingual support. By utilizing Gemini AI to synthesize structured writing materials, teachers can provide students with tailored vocabulary lists, sentence models, and clear generic structures for descriptive texts.

Therefore, rather than letting students use AI randomly, this study proposes the use of pre-synthesized structured materials created by Gemini AI to assist students in their writing process. By comparing a class using these AI-generated materials with a class using conventional methods, this study aims to determine the effectiveness of such technology in a formal classroom setting.

Based on these considerations, this study adopts a quasi-experimental design to investigate the impact of these materials. The research focuses on bridging the gap between students' familiarity with technology and their actual performance in writing, specifically at SMA Negeri 1 Ngimbang.

B. Research Problem

While eleventh-grade students at SMA Negeri 1 Ngimbang are generally tech-savvy, field observations and informal chats revealed that this digital familiarity does not translate into good writing skills. In fact, many learners still view English as a major hurdle. Deeper conversations showed that when they try to write, a lack of structured guidance leaves them struggling with basic sentence formation and limited contextual vocabulary, which ultimately drains their confidence in creating original work. Their current tech use remains passive and detached from classroom writing tasks. This specific gap underscores why integrating a structured, AI-enhanced tool—like Gemini AI-synthesized materials—is so critical to provide the sentence modeling and linguistic frameworks they actually need.

C. Research Questions

Based on the issues described above, the research question for this study is formulated as follows:

“Is there a significant effect of Gemini AI-synthesized structured materials on students' writing skill?”

D. Research Objectives

To address the research questions, this study focuses on investigating the efficacy of structured instructional materials synthesized via Gemini AI in enhancing students' writing skill.

E. Research Hypothesis

Based on the research questions and objectives described above, the hypothesis in this study is formulated as follows:

1. Null Hypothesis (H_0): There is no significant difference in the effect of using Gemini AI-synthesized structured materials on students' writing skills.
2. Alternative Hypothesis (H_a): There is a significant difference in students' writing skills resulting from the use of Gemini AI-synthesized structured materials.

F. Significance of the Study

This research is expected to provide theoretical and practical contributions to the field of ELT (English Language Teaching). Theoretically, these findings are expected to enrich the existing literature on the integration of Artificial Intelligence (AI) in developing productive language skills and strengthen the application of Scaffolding Theory by providing evidence of how Gemini AI-synthesized structured materials can provide the necessary support to enhance students' writing skills. Practically, this study provides insights for English teachers on how Gemini AI can be utilized to generate structured instructional materials as an innovative alternative to traditional resources. For students, the use of these AI-synthesized materials offers a more engaging and

systematic writing strategy to overcome persistent difficulties in sentence construction, grammatical accuracy, and idea organization. Furthermore, for future researchers, these findings can serve as a valuable reference for conducting further experimental studies regarding the effectiveness of AI-generated content in improving English writing proficiency.

G. Scope and Limitation

The scope of this study is focused on the effect of Gemini AI-synthesized structured materials on the writing skill of eleventh-grade students at SMA Negeri 1 Ngimbang. Through a quasi-experimental comparison between an experimental and a control group, this study evaluates how students improve in specific writing areas, namely content, organization, vocabulary, grammar, and mechanics.

However, this research is subject to several limitations, primarily its quasi-experimental nature where participants are not randomly assigned, which may affect the generalizability of the findings to broader populations. The study is also limited by the specific duration of the treatment and the fact that the writing materials are pre-synthesized by the researcher using Gemini AI, which may not represent all possible genres or instructional uses of the tool.

H. Definition of Key Terms

1. Gemini AI: A generative artificial intelligence tool used to synthesize and organize instructional writing materials through specific text-based prompts to support students' writing process.

2. Gemini AI-Synthesized Structured Materials: Instructional resources, such as sentence models, text frameworks, and language features, that are generated and structured by Gemini AI to provide systematic guidance for students in writing.
3. Writing Skill: Students' ability to produce coherent, cohesive, and grammatically correct English texts, measured through specific criteria including content, organization, vocabulary, grammar, and mechanics.