

# CHAPTER I

## INTRODUCTION

This chapter consists of the background of the study, research problem, objective of the research, significance of the research, scope and limitation of the research, and definition of key terms.

### A. Background of The Study

Writing is recognized as one of the most demanding skills for Indonesian junior high school students, as it requires mastery of vocabulary, grammar, organization, and coherence. Writing involves the ability to transform ideas into structured language that fulfills communicative purposes. Brown states that writing demands logical sequencing and clear expression essential for effective communication and academic performance.<sup>1</sup> Meanwhile, Weigle explains that writing performance is evaluated based on five interrelated components: content, organization, vocabulary, grammar, and mechanics.<sup>2</sup> These components determine the overall quality of learners' written texts and form the basis of writing assessment.

Technological developments particularly Artificial Intelligence (AI) have introduced new opportunities for supporting students' writing development. AI tools such as ChatGPT, Grammarly, and QuillBot offer

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<sup>1</sup> H. Douglas Brown, *Language Assessment: Principles and Classroom Practices* (NY, United States: Springer, 2010).

<sup>2</sup> Sara Cushing Weigle, *Assessing Writing* (Cambridge University Press, 2002), <https://doi.org/10.1017/CBO9780511732997>.

real-time suggestions for generating ideas, correcting grammar, and enhancing coherence. When used appropriately, AI can complement traditional instruction by providing individualized feedback. However, the effectiveness of such tools relies heavily on students' AI literacy, which refers to their ability to understand, evaluate, and use AI responsibly. Davy Tsz and Samuel Kai conceptualize AI literacy as a set of competencies involving affective, behavioral, cognitive, and ethical dimensions.<sup>3</sup> Students who lack these competencies may misuse AI tools or depend excessively on automated text.

English writing performance in this study refers specifically to students' ability to produce descriptive texts according to the Indonesian junior high school curriculum. Writing performance is measured through five key components: content, organization, vocabulary, language use, and mechanics. This construct is assessed using an analytic scoring rubric to ensure consistent and objective evaluation. By narrowing the focus to descriptive writing, this study concentrates on a specific, measurable writing skill that aligns with curriculum criteria and is directly observable in classroom practice.

Preliminary classroom observations conducted in 7<sup>th</sup> grade students at SMPN 1 Sumbergempol show that many students face challenges in descriptive writing tasks. Some students struggle to generate ideas, organize paragraphs, and select precise vocabulary. Grammatical errors

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<sup>3</sup> Samuel Kai Wah Chu. Ng, Davy Tsz Kit, Jiahong Su, "Fostering Secondary School Students' AI Literacy through Making AI-Driven Recycling Bins.," *Education and Information Technologies* 9, no. June 2024 (2024), <https://doi.org/10.1007/s10639-023-12183-9>.

such as incorrect verb use and improper sentence structure are frequently found. Moreover, several students rely heavily on basic translation applications, and some attempt to copy AI-generated sentences without understanding their meaning. These patterns reflect insufficient AI literacy and highlight students' inability to critically evaluate AI outputs.

Although research on AI-assisted writing has grown, most studies focus on university or vocational learners, and only a few examine junior high school students, who differ cognitively and developmentally from older learners. Existing studies also tend to focus on individual AI tools whereas this study considers AI literacy as an integrated set of competencies. Moreover, limited research explores how AI literacy relates specifically to descriptive writing performance in the Indonesian EFL context. This lack of empirical evidence represents a significant research gap that this study aims to address.

Given these conditions, understanding how AI literacy relates to English writing performance among junior high school students has become increasingly important. Limited research at this level underscores the need for empirical evidence. Therefore, this study investigates the correlation between students' AI literacy and their English descriptive writing performance at SMPN 1 Sumbergempol, Tulungagung. The findings are expected to contribute empirical evidence that supports the development of better instructional models, promotes ethical AI use, and strengthens writing competence of young learners.

## **B. Research Problem**

Based on the background of the study above, the research problem can be described as follow: “Is there any correlation between students’ AI literacy and their English descriptive writing performance at SMPN 1 Sumbergempol Tulungagung?”

## **C. Objectives of the Research**

The objective of this research is to determine whether there is a significant correlation between students’ AI literacy and their English descriptive writing performance at SMPN 1 Sumbergempol Tulungagung.

## **D. Research Hypothesis**

There are two hypotheses used in this study, namely:

### **1. Null Hypothesis:**

There is no significant correlation between students’ AI literacy and their English descriptive writing performance at SMPN 1 Sumbergempol Tulungagung.

### **2. Alternative Hypothesis:**

There is a significant correlation between students’ AI literacy and their English descriptive writing performance at SMPN 1 Sumbergempol Tulungagung.

## **E. Significance of the Research**

### **1. Theoretical Significance**

The study will contribute to the literature on AI literacy in EFL education, particularly in relation to descriptive writing performance and the study will fill the gap in research on junior high school students' AI literacy, which has received less attention compared to vocational institution and university levels.

### **2. Practical Significance**

#### **a. For Teachers**

The study helps English teachers to design and develop more engaging writing lessons using AI tools. It guides them on how to teach students to use AI wisely and develop their own writing skills responsibly.

#### **b. For Students**

The study helps students to learn how to use AI tools effectively without losing their own writing ability. It builds awareness that AI can help, but real writing skills come from practice and creativity.

#### **c. For Future Researchers**

The study provides a basis for future research on AI literacy and writing. Other researchers can use and adapt this study to explore AI use in different schools, skills, or learning contexts.

## **F. Scope and Limitation of the Research**

### **1. Scope of the Research**

This study is limited to investigate the correlation between students' AI literacy and their English descriptive writing performance. The discussion of AI literacy focuses on students' ability to understand and use AI tools such as ChatGPT, Grammarly, and QuillBot as part of their learning process. The descriptive text discussed in this study is based on the syllabus for seventh grade students at SMPN 1 Sumbergempol Tulungagung.

### **2. Limitation of the Research**

This study does not explain in detail how or why students' AI literacy can influence their writing ability. It only focuses on identifying whether there is a correlation between two variables and this study does not cover other aspects of AI use beyond ChatGPT, Grammarly, and QuillBot. Considering that the data needed is only related to students' AI literacy and their English descriptive writing performance.

## G. Definition of Key Terms

To clarify the terms and the contents of the research topic, the key terms that are used as following:

### 1. Artificial Intelligence (AI)

Artificial Intelligence (AI) refers to computational systems designed to perform tasks that typically require human intelligence, including reasoning, problem-solving, learning, and natural language understanding.<sup>4</sup>

### 2. AI Literacy

AI literacy is a set of competencies that enable individuals to understand, evaluate, and responsibly use AI technologies.<sup>5</sup> In the context of EFL learning, AI literacy includes the ability to critically operate AI-based writing tools such as ChatGPT for idea generation and coherence, Grammarly for correcting grammar and mechanics, and QuillBot for paraphrasing and lexical enrichment.

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<sup>4</sup> Peter Norvig, “Artificial Intelligence : A Modern Approach ( 3rd Edition ) by Stuart,” n.d.

<sup>5</sup> Duri Long and Brian Magerko, “What Is AI Literacy? Competencies and Design Considerations,” *Conference on Human Factors in Computing Systems - Proceedings*, 2020, 1–16, <https://doi.org/10.1145/3313831.3376727>.

### 3. Writing Performance

Writing performance refers to measurable outcomes of students' writing ability, typically assessed based on content, organization, vocabulary, grammar, and mechanics.<sup>6</sup>

### 4. Descriptive Text

Descriptive text is a genre of writing that provides detailed information about people, places, objects, or events using sensory language and specific details. Its structure generally consists of identification and description.<sup>7</sup>

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<sup>6</sup> Weigle, *Assessing Writing*.

<sup>7</sup> Peter Wignell Gerot, Linda, *Making Sense of Functional Grammar: An Introductory Workbook* (Antipodean Educational Enterprises, 1994).