

THE LINK BETWEEN CRITICAL THINKING ABILITY AND WRITING ACHIEVEMENT OF ELEVENTH-GRADE STUDENTS

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ABSTRACT: Effective writing necessitates that students generate important ideas, organize them coherently, and articulate their ideas clearly using suitable language. This study examined the relationship between critical thinking ability and writing achievement among eleventh-grade students in Palembang. The population consisted of 518 students, from which 67 students were selected through convenience sampling. The data were obtained using the Cornell Critical Thinking Test Form X (CCTT-X) and a writing assessment. The results revealed a significant positive correlation between critical thinking ability and writing achievement, with a correlation coefficient of 0.546. Furthermore, critical thinking skills significantly influenced students' writing achievement, explaining 29.8% of the variance, as indicated by an R-squared value of 0.298. Based on these findings, the alternative hypothesis (H_a) was accepted, while the null hypothesis (H_0) was rejected, demonstrating a significant relationship between critical thinking and writing performance. The researchers suggest that these findings may provide useful information for English teachers, students, and future researchers interested in the development of critical thinking and writing skills.

Keywords: *critical thinking, writing achievement, correlation, eleventh grade*

HUBUNGAN ANTARA KEMAMPUAN BERPIKIR KRITIS DAN PENCAPAIAN MENULIS ANAK KELAS SEBELAS

ABSTRAK: Penulisan yang efektif menuntut para pelajar mampu menghasilkan gagasan penting, menata ide-ide tersebut secara terstruktur, dan mengungkapkannya dengan jelas menggunakan bahasa yang tepat. Penelitian ini meneliti keterkaitan antara kemampuan berpikir kritis dan prestasi menulis pada siswi dan siswa kelas XI di Palembang. Populasi terdiri dari 518 peserta, di mana 67 siswa dipilih melalui teknik pengambilan sampel sukarela. Data dikumpulkan menggunakan Cornell Critical Thinking Test Form X (CCTT-X) serta penilaian menulis. Hasil menunjukkan adanya korelasi positif yang signifikan antara kemampuan berpikir kritis dan prestasi menulis, dengan koefisien korelasi sebesar 0,546. Selain itu, keterampilan berpikir kritis secara substansial memengaruhi hasil menulis siswa, menjelaskan 29,8 % variasi, sebagaimana ditunjukkan oleh nilai R^2 sebesar 0,298. Berdasarkan temuan tersebut, hipotesis alternatif diterima dan hipotesis nol ditolak, menandakan adanya hubungan yang nyata antara berpikir kritis dan kinerja menulis. Peneliti mengindikasikan bahwa temuan ini dapat menjadi referensi berharga bagi pendidik bahasa Inggris, pelajar, dan peneliti di masa depan yang tertarik mengembangkan kemampuan berpikir kritis serta menulis.

Kata Kunci: *berpikir kritis, pencapaian menulis, korelasi, kelas sebelas*

INTRODUCTION

Writing is a complex and multifaceted process that involves converting thoughts and ideas into written language. Tiwari (2019) explained that writing requires students to generate relevant ideas, arrange them systematically, and communicate them using an appropriate style. In other words, writing is the process of expressing thoughts, ideas, and feelings through written words. Similarly, Aryanika (2016) stated that writing involves forming letters and words on paper or organizing various written elements to communicate ideas visually. Therefore, effective writing requires students to develop meaningful ideas, organize them coherently, and express their thoughts clearly through appropriate language.

Writing plays a significant role in English language learning, particularly in the acquisition of a foreign language. Harmer (2019) stated that writing is an essential component of foreign language education. In the early stages of learning, students focus on developing basic skills such as handwriting and spelling as a foundation for writing in a new language. Similarly, Citraresmana (2018) explained that writing is one of the fundamental language skills that can be used to assess students' language development. Through writing, learners are able to communicate their purposes, ideas, and feelings effectively. Furthermore, Amanda et al. (2024) emphasized that writing provides individuals with an opportunity to express their identity, develop their thinking abilities, construct logical and persuasive arguments, and reflect on their own perspectives. Regular writing activities can therefore contribute not only to the improvement of writing proficiency but also to the development of critical thinking skills. Consequently, writing is an important aspect of foreign language learning because it reflects learners' language competence and enables them to communicate their ideas and emotions effectively. In addition, writing supports cognitive development, encourages logical reasoning, strengthens argumentation, and provides opportunities for self-reflection.

Critical thinking ability is an important factor in helping students achieve success in writing. According to Paul and Elder (2020), the process of writing involves generating, developing, and organizing ideas, which are closely related to the process of critical thinking. Critical thinking can be understood as the ability to make well-informed decisions through observation, analysis, evaluation, and problem-solving. Likewise, Paul and Elder (2020) described critical thinking as the ability to think logically and clearly when determining appropriate actions or deciding what to believe. This ability involves evaluating information, examining arguments critically, and making reasonable judgments. Therefore, the processes of observing, analyzing, and solving problems in order to make appropriate decisions are considered important aspects of critical thinking. In conclusion, critical thinking can be understood as the ability to think logically and clearly by analyzing information, evaluating arguments, and making informed

Critical thinking is an important part of the learning process and can help students address difficulties they encounter in writing. Critical thinking helps students identify relevant information, communicate and evaluate their understanding effectively, and develop strategies to achieve their objectives. It also supports students in becoming more capable problem-solvers and decision-makers. In the learning process, critical thinking is essential for developing logical arguments and establishing well-reasoned opinions. Similarly, Paul and Elder (2020) explained that critical thinking involves examining the structure of arguments, allowing writers to assess the validity of their claims and the evidence used to support them. Through this process, students can produce writing that is

more convincing, coherent, and supported by appropriate evidence. Therefore, critical thinking plays an important role in enhancing students' writing skills by enabling them to identify relevant information, communicate their ideas clearly, formulate logical arguments, and develop well-supported viewpoints.

Based on a preliminary study conducted through interviews with one English teacher and two eleventh-grade students at one of the senior high schools in Palembang, several difficulties were identified in students' writing skills, particularly in composing analytical exposition texts. One of the main problems was students' limited ability and willingness to engage in critical thinking, as well as their insufficient vocabulary knowledge. The students also tended to depend heavily on smartphones to search for unfamiliar words when writing in English. The two eleventh-grade students reported that they had difficulties translating unfamiliar vocabulary and arranging words into coherent and well-organized paragraphs. They also indicated that when they made mistakes in their writing, they were often reluctant to revise or correct them and instead preferred to leave their writing unchanged. In addition, students' limited critical thinking skills became another concern, even though critical thinking is an important factor in developing students' understanding and writing abilities. The English teacher at one of the senior high schools in Palembang also explained that the eleventh-grade students demonstrated different levels of writing ability and achievement. Some students had already understood how to construct analytical exposition texts and were able to produce them independently, while others could only complete them to a limited extent, and some were still unable to produce the texts properly. Furthermore, a noticeable difference could be observed between students with stronger critical thinking skills and those with weaker critical thinking abilities. Students who were more accustomed to thinking critically tended to show greater interest in writing, organize their ideas more easily, and develop their writing more effectively. In contrast, students with lower critical thinking skills generally experienced greater difficulty in organizing and developing their ideas.

These findings suggest that critical thinking is closely related to students' writing achievement and can support them in improving their ability to organize, develop, and express ideas effectively in written form. One study has examined critical thinking in English learning skills. A study conducted by Putri (2017) revealed a strong relationship between critical thinking and argumentative writing skills. The research aimed to examine the correlation between students' critical thinking abilities and their writing performance. The findings showed a significant positive correlation, with a correlation coefficient of 0.695. These results led to the acceptance of the alternative hypothesis and the rejection of the null hypothesis, indicating that critical thinking skills have a significant influence on students' ability to write argumentative texts. The aim of this study is to investigate the correlation between the critical thinking skills of eleventh-grade students of senior high school in Palembang and their writing performance in analytical exposition texts.

METHODOLOGY

1. Research Method and Design

This study employed a quantitative research approach using a correlational research design. Johnson and Christensen (2012) explained that correlational research is a type of non-experimental research that focuses on examining the relationship between quantitative variables.

2. Population and Sample

The population of this study comprised eleventh-grade students at a senior high school in Palembang, South Sumatera, Indonesia, during the 2024/2025 academic year. The sample in this study was selected using a convenience sampling technique. Creswell and Creswell (2018) explained that convenience sampling involves selecting participants who are readily accessible to the researcher. In this study, the research was conducted in classes XI.1 and XI.2, consisting of 46 and 47 students, respectively. However, not all students were present during the data collection period. Prior to conducting the research, the researcher monitored the students' attendance several times and found that a considerable number of students were frequently absent from both classes, despite there being no school activities or other apparent obstacles affecting the teaching and learning process.

3. Data Collection Technique

In this study, the Cornell Critical Thinking Test (CCTT) Level X was employed as the instrument for measuring students' critical thinking skills. This standardized test, developed by Ennis and Millman (1985), was selected because it is specifically intended for students in grades 9–12 and provides a comprehensive assessment of several aspects of critical thinking, including induction, deduction, evaluating credibility, and identifying assumptions. The original CCTT Level X consists of 78 multiple-choice items, including six sample questions. Therefore, 72 questions are administered as test items, with a completion time of 60 minutes. However, before the main study was conducted, the researcher carried out a preliminary test in a different class to examine the validity and suitability of the items. The results indicated that 38 of the 72 test items were considered valid and appropriate for use in the main study. The Cornell Critical Thinking Test Form X administered in this study was provided in Indonesian to facilitate participants' understanding of the test items.

This writing test was administered to measure the writing ability of eleventh-grade senior high school students in producing exposition texts. As part of the assessment, students were required to compose an exposition text based on a topic provided by the researcher. During the test, the students were instructed to express their opinions about a predetermined subject, which could include objects, places, or events. The students were expected to develop their arguments in a way that could persuade readers to accept their viewpoint by presenting and supporting a single position on the topic.

4. Data Analysis Technique

The collected data were then analyzed using the Pearson Product-Moment Correlation Coefficient and regression analysis to examine the relationship between the variables.

FINDINGS AND DISCUSSION

Critical Thinking Levels

To analyze the frequency distribution, we examined the scores, their frequency, and their percentage. These scores were obtained from two sources: students' critical thinking and students' writing achievement. The frequency distribution analysis provided the score intervals, frequencies, and percentages. The results of the students' critical

thinking skills are presented in the following table.

Table 1. *Distribution of data frequency on students' critical thinking.*

Score	Frequency	Percentage	Category
75-100	27	(40.3%) who	High
74-40	37	(55.2%)	Medium
39-0	3	(4.5%)	Low
Total	67	100%	

Based on the results of the analysis of students' critical thinking, it showed that there were 27 students (40.3%) who were categorized as high-level critical thinking, followed by 37 students (55.2%) who were categorized as medium critical thinking, and 3 students (4.5%) who were categorized as low critical thinking.

Descriptive Analysis Results: Critical Thinking

The results of descriptive statistics analysis of students' critical thinking are described in the table below.

Table 2. *Descriptive analysis of students' critical thinking*

	N	Minimum	Maximum	Mean	Std. Deviation
Critical Thinking	67	5	95	66.79	17.569
Valid N (listwise)	67				

The descriptive analysis of students' critical thinking skills showed that the study involved 67 students. The minimum score was 18, while the maximum score was 89. The mean score was 63.01, with a standard deviation of 15.980.

Writing Achievement

The frequency distribution of the data on students' writing achievement is presented in the following table.

Table 3. *Distribution of data frequency on writing achievement*

Score	Frequency	Percentage	Category
81-100	47	(70.1%) who	Very Good
61-80	16	(23.9%)	Good
41-60	2	(3%)	Fair
21-40	2	(3%)	Poor
0-20	0	0	Very Poor
Total	67	(100%)	

Based on the result analysis of writing achievement, it showed that there were 47 students (70.1%) who were categorized as very good writers, followed by 16 students (23.9%) who were categorized as good writers, 2 students (3%) who were categorized as fair writers, and 2 students (3%) who were categorized as poor in writing achievement. The results of the descriptive analysis of writing achievement are presented in the table below.

Table 4. *Descriptive analysis of writing achievement*

	N	Minimum	Maximum	Mean	Std. Deviation
Writing Achievement	67	29	99	83.55,	15.179
Valid N (listwise)	67				

In the descriptive analysis of writing achievement, it was found that the total number of samples was 67 students. The minimum score was 29, the maximum score was 99 students, the mean score was 83.55, and the score of standard deviation was 15.179.

The Correlation between Critical Thinking and Writing Achievement.

The results indicated a correlation between critical thinking and writing achievement, as shown by the Pearson Product Moment Coefficient. Table 11 shows the results of the Pearson Product Moment Coefficient.

Table 5. *Correlation between critical thinking and writing achievement*

		Critical Thinking	Writing Achievement
Critical Thinking	Pearson Correlation	1	.546**
	Sig. (2-tailed)		.000
	N	67	67
Writing Achievement	Pearson Correlation	.546**	1
	Sig. (2-tailed)	.000	
	N	67	67

Based on the results presented in the table, the significance value (Sig. 2-tailed) was 0.000, which was lower than the significance level of 0.05. In addition, the obtained correlation coefficient ($r = 0.546$) was higher than the r -table value (0.240). The findings demonstrated a statistically significant relationship between critical thinking skills and writing achievement. The correlation coefficient of 0.546 fell within the range of 0.40–0.599, indicating a moderate level of correlation.

Therefore, the findings demonstrated a significant positive relationship between students' critical thinking skills and their writing achievement. This means that students with higher levels of critical thinking tended to achieve better writing performance. Based on the findings, the alternative hypothesis (H_a) was supported, whereas the null hypothesis (H_0) was rejected. Therefore, the results indicated that critical thinking skills had a significant positive relationship with students' writing achievement.

Regression Analysis Results

To examine the contribution of critical thinking to students' writing achievement, regression analysis was utilized as the analysis technique. Table 6 presents the results of regression analysis.

Table 6. *Regression analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.546 ^a	.298	.287	12.817

The results presented in the table show a correlation coefficient (R) of 0.546, with a coefficient of determination (R^2) of 0.298. This indicates that critical thinking, represented as variable X , contributed 29.8% to the variation in students' writing achievement, represented as variable Y . The findings therefore suggest that critical thinking had a significant contribution to students' writing achievement. Based on these results, the alternative hypothesis (H_a) was accepted, whereas the null hypothesis (H_0) was rejected.

Discussion

The findings indicated a significant relationship between critical thinking skills and writing achievement among eleventh-grade students at one of the senior high schools in Palembang. First, the findings demonstrated a significant relationship between students' critical thinking skills and their writing achievement, as shown by the Pearson Product-Moment correlation coefficient of 0.546. This relationship may be associated with the relatively good level of critical thinking skills demonstrated by the eleventh-grade students at one of the senior high schools in Palembang. The students had been exposed to learning activities that encouraged them to apply critical thinking during the learning process. The preliminary study also indicated that the students had previously learned about analytical exposition texts. Nevertheless, they still encountered several difficulties, particularly limited vocabulary and a tendency to depend on mobile phones when searching for unfamiliar words. Despite these challenges, students with stronger critical thinking skills were better able to identify, process, and select appropriate vocabulary when developing their writing. This finding suggests that critical thinking skills are associated with students' ability to produce better written work.

Furthermore, the correlation found in this study is consistent with previous research, including studies conducted by Putri (2017) and Agustina et al. (2022). However, each study was conducted in a different educational context and may have employed different research procedures and methodologies. Therefore, although a correlation indicates an association between two variables, it does not necessarily demonstrate a direct causal relationship between critical thinking and writing achievement. The findings should consequently be interpreted carefully, particularly when attempting to generalize them to other educational contexts. Similarly, Juandri et al. (2018) found a significant association between critical thinking skills and writing achievement among third-semester students at a university in West Sumatra. Their findings showed a correlation coefficient of 0.635, indicating a moderate level of correlation. The researchers concluded that critical thinking was significantly related to writing achievement among third-semester students in one of the senior high schools in Palembang.

Second, the findings indicated that critical thinking contributed 29.8% to the variation in students' writing achievement. This finding can be further understood through relevant theoretical perspectives. Based on the theory proposed by Paul and Elder (2020), critical thinking enables writers to examine issues more deeply, recognize potential biases, and develop meaningful and well-reasoned written work. It also helps writers evaluate information by considering aspects such as clarity, accuracy, and consistency, while supporting their arguments through appropriate evidence and logical reasoning. In addition, Farr and Ruggerio (2022) explained that writing involves different cognitive processes throughout the composition process. At certain stages, students engage in creative thinking by generating new ideas and determining appropriate ways to

express those ideas. Reilly and Langan (2018) further stated that critical thinking occurs when students evaluate the results of their creative thinking processes.

In conclusion, this study provides meaningful evidence concerning the relationship between critical thinking and writing achievement among eleventh-grade students. The results showed there was a significant correlation between critical thinking ability and writing achievement of eleventh-grade students. As indicated by a Pearson Product Moment correlation coefficient of 0.546. Nevertheless, these findings should be interpreted with consideration of the diverse characteristics of students and the various factors that may affect their writing achievement. The study can therefore serve as a foundation for further research examining the complex relationship between critical thinking and writing performance across different educational contexts and instructional approaches. Further investigation may contribute to the development of more effective teaching strategies that support students' critical thinking and writing abilities and address their learning needs more comprehensively.

CONCLUSION

The results showed that there was a significant relationship between critical thinking skills and writing achievement among eleventh-grade students. In conclusion, this study provides valuable insights into the relationship between critical thinking and writing achievement among eleventh-grade students. The significant correlation coefficient, consistent with previous studies, highlights the importance of critical thinking.

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