



THE CORRELATION BETWEEN VOCABULARY MASTERY AND WRITING DESCRIPTIVE TEXTS OF GRADE X STUDENTS OF SMAN 2 DUMAI

Mardatus Soleha¹, Erni², Masyhur³

^{1,2,3} Universitas Riau, Pekanbaru, Indonesia

Email:¹ mardatus.soleha4677@students.unri.ac.id, ² erni@lecturer.unri.ac.id, ³ masyhur@lecturer.unri.ac.id

ABSTRACT

This study investigates the correlation between vocabulary mastery and the ability to write descriptive texts among Grade X students at SMAN 2 Dumai. The research aims to determine the extent of students' vocabulary knowledge, their proficiency in writing descriptive texts, and whether a significant relationship exists between the two variables. Employing a quantitative correlational research design, data were collected from 37 students selected through cluster random sampling. Two instruments were used: a multiple-choice vocabulary test and a descriptive text writing test. The results showed that students' vocabulary mastery was generally at a sufficient level ($M = 62.11$, $SD = 11.96$), while their writing ability was slightly higher ($M = 68.79$, $SD = 7.47$). Statistical analysis using Spearman's rho revealed a moderate positive correlation ($r = 0.543$, $p = 0.001$) between vocabulary mastery and writing ability. Furthermore, the coefficient of determination ($R^2 = 0.294$) indicates that vocabulary mastery accounted for 29.4% of the variance in students' writing scores. These findings highlight the importance of vocabulary in developing writing skills, especially in producing descriptive texts. However, they also suggest that writing performance is influenced by multiple factors beyond vocabulary alone, such as grammar, fluency, and organization. This research contributes to the development of English language teaching by emphasizing the integration of vocabulary instruction within broader writing pedagogy.

Keywords: Vocabulary Mastery, Writing Ability, Descriptive Text, Correlation, Grade X

KORELASI ANTARA PENGUASAAN KOSAKATA DAN KEMAMPUAN MENULIS SISWA KELAS X SMAN 2 DUMAI

ABSTRAK

Penelitian ini bertujuan untuk mengetahui hubungan antara penguasaan kosakata dan kemampuan menulis teks deskriptif pada siswa kelas X SMAN 2 Dumai. Penelitian ini bertujuan untuk mengetahui sejauh mana tingkat penguasaan kosakata siswa, kemampuan mereka dalam menulis teks deskriptif, serta apakah terdapat hubungan yang signifikan antara kedua variabel tersebut. Penelitian ini menggunakan metode kuantitatif dengan desain korelasional. Sampel terdiri dari 37 siswa yang dipilih melalui teknik cluster random sampling. Instrumen yang digunakan adalah tes pilihan ganda untuk mengukur penguasaan kosakata dan tes menulis teks deskriptif. Hasil penelitian menunjukkan bahwa penguasaan kosakata siswa berada pada kategori cukup ($M = 62.11$, $SD = 11.96$), sedangkan kemampuan menulis siswa sedikit lebih tinggi ($M = 68.79$, $SD = 7.47$). Analisis statistik menggunakan Spearman's rho menunjukkan adanya korelasi positif sedang antara penguasaan kosakata dan kemampuan menulis ($r = 0.543$, $p = 0.001$). Selain itu, koefisien determinasi ($R^2 = 0.294$) menunjukkan bahwa penguasaan kosakata menyumbang sebesar 29,4% terhadap variasi skor menulis siswa. Temuan ini menegaskan pentingnya penguasaan kosakata dalam pengembangan keterampilan menulis, khususnya dalam menulis teks deskriptif. Namun, hasil ini juga menunjukkan bahwa kemampuan menulis dipengaruhi oleh berbagai faktor lain seperti tata bahasa, kelancaran, dan organisasi tulisan. Penelitian ini memberikan kontribusi terhadap pengembangan pembelajaran bahasa Inggris dengan menekankan pentingnya integrasi pengajaran kosakata dalam pengajaran menulis secara menyeluruh.

Kata Kunci: Penguasaan Kosakata, Kemampuan Menulis, Teks Deskriptif, Korelasi, Kelas X

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INTRODUCTION

Vocabulary is one of the most essential components in language learning and plays a critical role in the development of all four language skills: listening, speaking, reading, and writing. Without a sufficient vocabulary, learners struggle to understand and communicate effectively in the target language. Tarigan



(2011) emphasized that a person's ability in language is largely influenced by their vocabulary mastery, making it a foundational element in English language acquisition. This is particularly true in English as a Foreign Language (EFL) contexts, where exposure to authentic English is limited, and vocabulary must be explicitly taught and reinforced through instruction and practice.

In the context of writing, vocabulary is a key determinant of students' ability to articulate ideas clearly and effectively. Writing itself is a productive and complex skill that requires learners to organize thoughts, choose appropriate language, and follow grammatical conventions. As Sribagus (2018) explains, writing does not merely involve knowledge of grammar but also demands continuous practice and strategic use of language. Moreover, Aripin and Rahmat (2021) argue that to produce coherent and meaningful texts, students must possess sufficient lexical knowledge alongside other competencies such as sentence structure, fluency, and cohesion.

Aligned with these ideas, the Indonesian Kurikulum Merdeka mandates that senior high school students develop the ability to write a variety of text types, including descriptive texts. This genre allows students to express observations, impressions, or experiences by describing people, places, or objects. Writing descriptive texts requires not only an understanding of structure and purpose but also the ability to use accurate and varied vocabulary. According to Obisuru and Purbani (2016), descriptive writing involves more than simply stating facts; it demands the skillful use of language to create vivid imagery and convey nuanced meaning. However, for many students, the challenge lies in insufficient vocabulary mastery, which hampers their ability to compose detailed and expressive descriptions.

Preliminary observations and informal interviews conducted by the researcher with English teachers at SMAN 2 Dumai revealed that although students have been exposed to descriptive writing through the curriculum, a significant number still encounter difficulties in composing well-structured and engaging texts. Teachers reported that while some students demonstrated the ability to write fluently due to a broad vocabulary repertoire, approximately 70% of students in Grade X continued to struggle with constructing accurate and effective descriptive texts. These struggles often stemmed from limited vocabulary knowledge, which affected their ability to select precise words and express ideas clearly. Similar issues were noted in other studies, such as Kristiana et al. (2021), who found that vocabulary limitations were a key factor in writing difficulties among EFL learners.

While various factors contribute to writing performance—including grammar, mechanics, and organization—vocabulary remains a central element. Previous research on the relationship between vocabulary mastery and writing ability has produced mixed findings. For instance, Lisa (2023) found no significant correlation between vocabulary mastery and students' descriptive writing skills, whereas Aprilia (2021) discovered a weak positive relationship. These discrepancies suggest the need for further investigation, particularly in diverse educational contexts with different student populations and instructional approaches.

To address this gap, the current study investigates the correlation between vocabulary mastery and students' ability to write descriptive texts at SMAN 2 Dumai. By analyzing the extent to which vocabulary contributes to students' writing performance, this research aims to provide empirical evidence to support more effective teaching strategies in EFL writing classrooms. It also seeks to determine whether vocabulary mastery significantly influences students' ability to write descriptive texts, thus contributing to the broader discussion on how language skills are interconnected and how best to support students in developing them.

LITERATURE REVIEW

Vocabulary is a crucial component of language acquisition and is often considered the foundation for mastering the four main language skills: listening, speaking, reading, and writing. According to Alqahtani (2015), vocabulary refers to a set of familiar words within a person's language. Without adequate vocabulary, learners will have difficulty understanding others or expressing their own ideas. Thornbury (2007) further argues that vocabulary mastery is not only about knowing the meaning of a word but also about understanding how to use it accurately in different contexts. This includes recognizing word forms, collocations, and their grammatical functions. In language learning, vocabulary acts as a tool for students to comprehend and produce language effectively, which is why it must be prioritized in EFL instruction.



Several classifications of vocabulary have been proposed to aid the understanding of its structure and use. Miller (2000) divides vocabulary into four categories: receptive (listening and reading), expressive (speaking and writing), oral, and written vocabulary. These classifications demonstrate the multifaceted nature of vocabulary in communication. Beare (2018) also distinguishes between lexical words (such as nouns, verbs, adjectives, and adverbs) and grammatical words (such as prepositions, articles, and conjunctions), highlighting that vocabulary is not only about content but also about grammatical cohesion. Understanding both types is essential, especially in writing tasks where clarity and accuracy are required. Moreover, vocabulary tests—such as multiple choice, sentence completion, and matching—can assess different levels of word knowledge and usage (Thornbury, 2007).

Writing, on the other hand, is widely acknowledged as one of the most complex language skills, requiring not just linguistic knowledge but also the ability to organize and structure ideas clearly. Brown et al. (2001) describe writing as the product of planning, drafting, revising, and editing, all of which involve the strategic use of vocabulary and grammar. Writing becomes particularly challenging in EFL contexts where students may not have sufficient exposure to authentic language use. Hyland (2019) emphasizes that successful writing relies heavily on lexical competence, as it enables writers to express meaning precisely and appropriately. Furthermore, Huy (2020) notes that writing is a metacognitive activity that integrates knowledge, strategies, and language proficiency, reinforcing the idea that vocabulary mastery plays a central role in writing development. Descriptive writing is one of the key genres taught in high school and requires students to describe people, places, objects, or events with sufficient detail and clarity. According to Knapp and Watkins (2005), descriptive texts aim to create vivid imagery in the reader's mind through the use of specific vocabulary and descriptive language. This genre relies heavily on adjectives, adverbs, and relational verbs to provide accurate and engaging representations. The structure of a descriptive text typically includes an identification (introduction of the topic) followed by a detailed description. Sudarwati and Grace (2016) add that the language features of descriptive texts include the use of sensory adjectives, degree of comparison, and compound adjectives. Therefore, students must possess a sufficient vocabulary to meet these linguistic demands and effectively produce descriptive texts. Previous studies examining the relationship between vocabulary mastery and writing ability have produced mixed results. For example, Aprilia (2021) found a weak correlation ($r = 0.057$) between vocabulary mastery and descriptive writing skills among vocational high school students, suggesting that other factors may have a greater influence on writing performance. In contrast, Lisa (2023) discovered that vocabulary scores were relatively high, but students' writing performance remained low, leading to the conclusion that vocabulary alone does not ensure strong writing outcomes. These findings indicate that while vocabulary is undoubtedly a necessary component of writing, it must be supported by other competencies such as grammar, organization, and coherence. The varying outcomes in past research highlight the need for further investigation across different populations and contexts to better understand the extent of vocabulary's impact on writing.

RESEARCH METHOD

This study employed a quantitative correlational research design to investigate the relationship between vocabulary mastery and the ability to write descriptive texts among Grade X students at SMAN 2 Dumai. Correlational research is useful for determining the degree to which two variables are related without manipulating any of them (Sugiyono, 2020). In this study, the independent variable (X) was vocabulary mastery, and the dependent variable (Y) was students' descriptive writing ability. The research was conducted over several months, beginning in June 2023 and concluding in June 2025, following a structured timeline that included proposal development, data collection, data analysis, and thesis writing.

The population of this study consisted of 399 tenth-grade students from 11 classes at SMAN 2 Dumai. To determine the sample, the researcher used cluster random sampling, a method particularly suitable for educational research where individual sampling is often impractical. The selection process involved drawing lots, where class leaders picked papers, and the class whose representative drew the "SAMPLE" paper was selected. As a result, a total of 37 students from one class were chosen to participate in the study.

To measure the two variables, the researcher used two types of instruments. For vocabulary mastery, a



30-item multiple-choice test was developed, covering three lexical categories: nouns, verbs, and adjectives. The vocabulary items were aligned with the language features of descriptive texts to ensure relevance. For writing ability, an essay test was administered, requiring students to write a descriptive text of 200–300 words within 45 minutes. Students were given two topic options—one based on a person and one based on a place—or they could propose their own topic. The writing tasks were assessed based on five components: grammar, vocabulary use, mechanics, organization, and fluency. The scoring rubric was adapted from Hughes (2003) and applied by three independent raters to ensure reliability.

Data collection procedures followed a systematic approach. First, the vocabulary test was administered, followed by the writing task on a different day. Prior to full implementation, a try-out test was conducted for the vocabulary instrument to check the level of difficulty and item discrimination, using Heaton's (1989) formula. Only items with a difficulty index between 0.30 and 0.70 were retained. Students' vocabulary scores were then analyzed based on Arikunto's (2009) criteria for classifying achievement levels (e.g., excellent, good, sufficient). Data analysis was conducted using SPSS version 25. Descriptive statistics (mean, median, mode, standard deviation) were calculated to describe students' performance. The correlation between vocabulary mastery and writing ability was examined using the Spearman's rho correlation coefficient, since the normality test showed that one of the data sets was not normally distributed. Additionally, a coefficient of determination (R^2) was calculated to determine how much variance in writing scores could be explained by vocabulary mastery. Before correlation testing, normality and linearity tests were also performed to validate the assumptions of the analysis.

RESULTS AND DISCUSSION

This study aimed to determine the correlation between students' vocabulary mastery and their ability to write descriptive texts. Data were collected from 37 tenth-grade students at SMAN 2 Dumai through two instruments: a multiple-choice vocabulary test and a descriptive writing test. After scoring, the results were analyzed using descriptive statistics, normality and linearity tests, and Spearman's rho correlation coefficient via SPSS version 25.

Table 1. Statistical Scores of Vocabularies

Statistics		
Vocabulary		
N	Valid	37
	Missing	0
Mean		62.1081
Median		63.0000
Mode		67.00
Std. Deviation		11.96008
Variance		143.044
Minimum		27.00
Maximum		80.00

The descriptive statistics revealed that students' vocabulary scores ranged from 27.00 to 80.00, with a mean score of 62.11 and a standard deviation of 11.96, indicating a moderately wide variation in vocabulary mastery.

Table 2. Interpretation of Data Analysis of Students' Vocabulary

Score	Classification	Frequencies	Percentage
80-100	Excellent	3	8.1%
66-79	Good	13	35.1%
56-65	Sufficient	11	29.7%
40-55	Fairly Sufficient	9	24.3%
0-39	Poor	1	2.7%
Total		37	100%



Most students fell into the "good" (35.1%) and "sufficient" (29.7%) categories, while only 8.1% demonstrated "excellent" vocabulary mastery.

Table 3. Statistical Scores of Writings

Statistics		
Writing		
N	Valid	37
	Missing	0
Mean		68.7919
Median		65.3000
Mode		61.30
Std. Deviation		7.46780
Variance		55.768
Minimum		60.00
Maximum		88.00

On the other hand, the results of the descriptive writing test showed a mean score of 68.79 and a standard deviation of 7.47, with scores ranging from 60.00 to 88.00.

Table 4. Interpretation of Data Analysis of Students' Writing

Score	Classification	Frequencies	Percentage
80-100	Excellent	4	10.8%
66-79	Good	13	35.1%
56-65	Sufficient	20	54.1%
40-55	Fairly Sufficient	0	0.0%
0-39	Poor	0	0.0%
Total		37	100%

In contrast to the vocabulary results, more students were concentrated in the "sufficient" (54.1%) and "good" (35.1%) categories, while 10.8% achieved an "excellent" level of writing ability. This pattern indicates that, on average, students performed slightly better in writing than in vocabulary, although performance in both areas remained moderate.

Table 5. The Correlation Between Vocabulary Mastery and Writing Ability

Correlations				
			Vocabulary	Writing
Spearman's rho	Vocabulary	Correlation Coefficient	1,000	.543**
		Sig. (2-tailed)		0,001
		N	37	37
	Writing	Correlation Coefficient	.543**	1,000
		Sig. (2-tailed)	0,001	
		N	37	37

**. Correlation is significant at the 0.01 level (2-tailed).

Therefore, Spearman's rho was chosen for the correlation analysis. The findings revealed a statistically significant moderate positive correlation between vocabulary mastery and writing ability ($r = 0.543$, $p = 0.001$). This indicates that students with higher vocabulary mastery tend to have better



performance in writing descriptive texts.

Table 6. Determination Coefficient

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.542 ^a	0,294	0,273	6,36585
a. Predictors: (Constant), vocab				

Furthermore, the coefficient of determination ($R^2 = 0.294$) suggests that approximately 29.4% of the variance in writing scores can be explained by vocabulary mastery alone.

This result supports the hypothesis that vocabulary plays a central role in writing performance, especially in descriptive writing where lexical choices greatly influence the vividness and clarity of the text. As Knapp and Watkins (2005) and Sudarwati and Grace (2016) have emphasized, descriptive writing requires careful use of adjectives, adverbs, and sensory details—elements that are heavily dependent on students' lexical knowledge. Therefore, students who have mastered a broader range of vocabulary are more capable of producing clear, varied, and engaging descriptions.

These findings are also consistent with studies that underscore the importance of vocabulary in writing development. For example, Aripin and Rahmat (2021) found that vocabulary mastery significantly supports sentence construction and coherence, which are essential in composing descriptive texts. Moreover, Huy (2020) noted that writing is not simply the application of grammar rules but a cognitive activity that draws heavily on vocabulary knowledge to express ideas precisely. Thus, the results of this study add to the growing body of evidence that vocabulary is more than a supporting skill—it is a predictive factor in writing success.

However, it is also important to acknowledge that the correlation, while significant, is moderate rather than strong. The fact that vocabulary mastery only explains around 29.4% of the variance in writing performance suggests that other factors also contribute significantly. These may include students' grammatical competence, their ability to organize ideas, familiarity with text structure, writing fluency, and even psychological factors such as motivation or anxiety. Brown et al. (2001) and Hyland (2019) both highlight the multifaceted nature of writing, noting that vocabulary is just one component among several that influence writing outcomes.

CONCLUSION AND RECOMMENDATIONS

The present study explored the correlation between vocabulary mastery and the ability to write descriptive texts among Grade X students at SMAN 2 Dumai. The findings revealed a statistically significant moderate positive correlation ($r = 0.543$, $p = 0.001$), indicating that students with stronger vocabulary knowledge tended to perform better in writing descriptive texts. The analysis further showed that vocabulary mastery accounted for approximately 29.4% of the variance in writing scores, as reflected in the coefficient of determination ($R^2 = 0.294$). This suggests that while vocabulary is an essential component of writing proficiency, it is not the sole factor influencing students' writing performance.

The descriptive data highlighted that most students had a moderate level of vocabulary mastery, with the majority performing within the sufficient or good range. Writing scores followed a similar trend, though they were generally slightly higher. These findings underscore the pedagogical importance of vocabulary in supporting the development of writing skills, particularly in descriptive writing, which demands precise and expressive language. However, the moderate strength of the correlation also points to the influence of other writing sub-skills such as grammar, organization, fluency, and mechanics—all of which should be addressed in writing instruction.

Based on these conclusions, it is recommended that English teachers integrate vocabulary instruction more intentionally into writing lessons. This can be achieved through contextualized vocabulary activities, guided writing practices, and feedback that highlights word choice and usage. Teachers should also focus on improving students' grammatical competence and organizational skills to support overall writing



development. Additionally, collaborative writing tasks, peer review, and regular writing exercises can help students apply vocabulary in meaningful and communicative contexts.

For future researchers, it is suggested to expand the scope of inquiry by incorporating additional variables that may influence writing ability, such as reading habits, motivation, and exposure to written texts. Conducting similar studies in different educational settings with larger sample sizes and a mix of qualitative methods, such as interviews or writing journals, could also provide deeper insights into the dynamics between vocabulary and writing. Ultimately, this study contributes to the broader understanding of language education by emphasizing the interconnectedness of lexical knowledge and written expression in EFL contexts.

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