

Vocabulary Mastery and Grammatical Competence as Predictors of EFL Students' Writing Ability: Evidence from an Indonesian Vocational High School

Febri Listianingrum¹, Midah Nurhidayah², Sittin Masawoy³, Ardian Hangga Kelana⁴

¹⁻³Universitas Muhammadiyah Papua, Indonesia

⁴Universitas Internasional Papua, Indonesia

Corresponding Author:

Febri Listianingrum

sugengarif02@gmail.com

Abstract

Writing remains a challenging skill for learners of English as a foreign language (EFL) in Indonesia because it requires students to combine ideas, vocabulary, grammar, and text organization into coherent writing. This study examines vocabulary mastery and grammatical competence as predictors of the writing ability of grade XI vocational high school students in Jayapura, Papua. This study used a quantitative correlational design. The population consisted of 56 grade XI students at SMK Hikmah, Yapis Jayapura in the 2024/2025 academic year, and 23 students from the accounting program were selected as the sample through purposive sampling. Data were collected through three tests: a vocabulary mastery test, a grammatical competence test, and a writing ability test using a maze-based writing task. The data were analyzed using descriptive statistics, correlation analysis, and multiple linear regression. The findings show that students' vocabulary mastery, grammatical competence, and writing ability were positively related. The regression model was statistically significant, $F(2, 20) = 489.805$, $p < .001$, with $R = .990$ and $R^2 = .980$. Vocabulary mastery ($B = .538$, $p = .001$) and grammatical competence ($B = .432$, $p = .004$) were both significant predictors of writing ability. These findings show that writing instruction in EFL classes at vocational high schools needs to combine lexical development and communicative grammar practice instead of treating vocabulary and grammar as separate language components. This study provides contextual evidence from an underrepresented EFL setting in eastern Indonesia and offers practical implications for strengthening writing instruction in vocational high schools.

Keywords: *writing ability, grammatical competence, vocabulary mastery, vocational high school, EFL.*

Introduction

Writing is one of the most easily observed indicators of students' English ability because it requires them to turn ideas into written text that is organized, meaningful, and linguistically acceptable. In the context of English as a Foreign Language (EFL), writing is not merely the activity of constructing sentences but a complex process that requires students to select appropriate words, determine sentence structures, maintain coherence, and convey meaning to a specific audience (Nurdianingsih, 2021). This complexity explains why writing is often one of the most challenging English language skills for Indonesian students, particularly for those whose exposure to English is largely limited to classroom instruction (Manurung et al 2025).

Recent studies continue to show that EFL students' writing difficulties are closely related to linguistic factors. Through a meta-synthesis of research on EFL academic writing, Anaktototy (2023) identified linguistic difficulties as one of the main barriers that prevent students from producing effective texts. A qualitative meta-analysis of the writing challenges faced by Indonesian EFL students also reported that linguistic problems were the most common category of writing difficulty, with grammar as one of the main challenges (Lesmana & Ariffin, 2020). These findings show that writing instruction cannot focus only on ideas and text organization but also needs to strengthen the language resources that allow students to express ideas accurately.

This issue is very important in vocational high schools. Vocational high school students are expected to develop English skills for practical communication, job readiness, and further study. At the same time, many vocational high school students still have difficulty producing written texts because they have limited vocabulary, weak grammar mastery, and little practice in writing meaningful English sentences. The current Indonesian English curriculum also emphasizes the ability to produce spoken, written, and visual texts for different purposes and audiences, which shows that writing remains an important competence in secondary education (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2021). Therefore, identifying the linguistic factors that support writing skills remains relevant for study in EFL classes at vocational high schools.

Vocabulary mastery is one of the language components most often linked to writing quality. Students who have enough vocabulary tend to be able to express ideas clearly, choose words that match the intended meaning, and avoid too much repetition. Allagui et al (2024) found that vocabulary size had a strong positive relationship with the quality of EFL students' summary writing. Qasem et al (2021) reported that vocabulary mastery made a high and significant contribution to students' writing ability. Isma & Rasmin (2023) also showed that vocabulary errors in EFL writing were systematic and affected the clarity of students' written texts. These studies show that vocabulary is not only a supporting element but also a main resource for successful writing.

However, vocabulary alone does not ensure effective writing. Students also need grammatical competence to arrange words into acceptable phrases, clauses, and sentences. Grammar gives structure to ideas and helps readers understand the logical relationships between words and sentences. Pantau & Santosa (2017) found a significant correlation between grammar mastery and writing results, while Alfiansyah (2020) reported that grammar and vocabulary mastery together had a significant effect on students' essay writing skills. Bani (2025) also found that grammar was one of the weakest aspects of students' descriptive writing, as shown by errors in tense use, subject-verb agreement, punctuation, and capitalization. These findings confirm that grammar remains important in writing.

Although vocabulary and grammar have been widely discussed in research on EFL writing, several gaps remain. First, many studies examine vocabulary and grammar separately, even though writing ability is formed through the integration of these two components. Second, studies that examine vocabulary mastery and grammatical competence together generally focus on junior high school students, senior high school students, and university students. Vocational high school students have received less attention even though they have different characteristics and learning needs. Third, several recent studies have shown inconsistent results. Diarani & Syamsi (2019), for example, showed that vocabulary mastery made a strong contribution to students' writing ability. In contrast, a weak or non-significant relationship between vocabulary mastery and writing skills was reported (Yuhariah & Sujarwati, 2023). These different

findings show the need for contextual empirical evidence, especially from schools in regions that are underrepresented in research on EFL writing.

This study fills the gaps in previous research by examining vocabulary mastery and grammatical competence together as factors that influence the writing ability of EFL students at a vocational high school in Jayapura, Papua. This study not only explains the problems students experience in writing but also compares the influence of vocabulary and grammar on the writing ability of vocational high school students in eastern Indonesia. By using multiple regression analysis, this study provides evidence about whether vocabulary mastery and grammatical competence influence students' writing ability, both separately and together.

Based on this background, this study was guided by three research questions: (1) Does vocabulary mastery significantly predict students' writing ability? (2) Does grammatical competence significantly predict students' writing ability? and (3) Which of the two predictors makes a stronger contribution to students' writing ability? The results of this study are expected to improve understanding of writing instruction in the EFL context. In addition, the results are expected to help English teachers at vocational high school design writing instruction that balances vocabulary development and grammar practice.

Method

1) Research Design

This study used a quantitative correlational design. This design was chosen because the study aimed to determine whether vocabulary mastery and grammatical competence could predict students' writing ability. In this study, the researchers did not provide any special treatment in classroom instruction. The study only analyzed students' scores from vocabulary, grammar, and writing tests (Hu & Chou, 2022). Multiple linear regression analysis was used to determine the extent to which vocabulary mastery and grammatical competence could predict students' writing ability, both separately and together (Imawati 2017).

2) Participants and Research Context

The study was conducted at SMK Hikmah Yapis Jayapura, Papua, in the 2024/2025 academic year. The study population included all 56 grade XI students from three study programs: Accounting, Software Engineering, and Office Administration. The sample consisted of 23 Accounting students selected through purposive sampling. This class was chosen because it was a stable group of students, had completed the relevant English learning material, and was available to take part in three test sessions.

Table 1. Research Participants

Category	Description
School	SMK Hikmah Yapis Jayapura, Papua
Academic Year	2025/2026
Population	56 students from grade IX
Sample	23 Accounting students
Sampling technique	Purposive sampling

3) Instruments

Data in this study were collected using three instruments. The first instrument was a vocabulary mastery test. The test was in multiple-choice form and was used to measure students' understanding of English vocabulary based on the material they had learned (Salsabila et al., 2026). The second instrument was a grammatical competence test. This test was also in multiple-choice form and aimed to identify students' understanding of English sentence patterns and grammatical forms

(Adisutrisno, 2008). The third instrument was a writing ability test using a maze-based task (Loita et al., 2023). In this task, students were asked to complete a text by choosing the most appropriate word from several available options.

The maze-based writing task was used because it matched the students' ability level. Based on the initial observation, many students still had difficulty writing long free essays. Therefore, this test was used to measure students' ability to complete a text by choosing the correct words and grammar. Before being used to collect data, the instruments were tried out in another grade XI class to determine the validity and reliability of the test items.

4) Data Collection and Analysis

Data were collected in three test sessions. The vocabulary mastery test, grammatical competence test, and writing ability test were given at different times so that students would not become too tired and could concentrate better on each test (Yuhariah & Sujarwati, 2023). Each test was scored objectively. A correct answer received a score of 1, while an incorrect answer received a score of 0. The students' raw scores were then converted into percentage scores.

The data were analyzed using descriptive statistics, Pearson correlation, and multiple linear regression. Descriptive statistics were used to give a general description of students' vocabulary, grammar, and writing scores. Correlation analysis was used to test the relationships among the variables. Multiple linear regression was used to test the extent to which vocabulary mastery and grammatical competence could predict students' writing ability. The regression formula used was $Y = a + b_1X_1 + b_2X_2$. In this formula, Y represents writing ability, X1 represents vocabulary mastery, and X2 represents grammatical competence.

Results

1) Descriptive Statistics

Descriptive statistics show that the mean score for students' writing ability was higher than the mean scores for vocabulary and grammar. The mean writing ability score was 68.913, while the mean scores for vocabulary mastery and grammatical competence were 63.152 and 63.478, respectively. The standard deviations show that students' scores varied across the three tests.

Table 2. Statistik Deskriptif Skor Kosakata, Tata Bahasa, dan Menulis

Variable	N	Minimum	Maximum	Mean	Standard Deviation
Writing ability	23	32.5	90.0	68.913	16.7336
Vocabulary mastery	23	30.0	90.0	63.152	16.8923
Grammatical competence	23	30.0	87.5	63.478	17.5606

2) Correlations among Variables

The correlation results show strong positive relationships among the variables. Vocabulary mastery was strongly correlated with writing ability ($r = .938$), while grammatical competence was also strongly correlated with writing ability ($r = .967$). Vocabulary mastery and grammatical competence were also very strongly correlated with each other ($r = .926$). These results show that students with higher vocabulary and grammar scores also tended to obtain higher writing ability scores.

Table 3. Correlations among Vocabulary, Grammar, and Writing

Variable	Writing	Vocabulary	Grammar
Writing ability	1.000	.938**	.967**
Vocabulary mastery	.938**	1.000	.926**
Grammatical competence	.967**	.926**	1.000

Note. ** Correlation is significant at the 0.01 level.

3) Multiple Regression Analysis

Multiple linear regression was conducted to test the predictive contributions of vocabulary mastery and grammatical competence to writing ability. The model was statistically significant, $F(2, 20) = 489.805$, $p < .001$. The model summary shows $R = .990$ and $R^2 = .980$, which means that the two predictors together explained 98% of the variance in writing ability. This high value shows a very strong relationship between the two predictors and writing ability in this study sample.

Table 4. Modal Summary and ANOVA Results

Statistic	Value
R	.990
R Square	.980
Adjusted R Square	.978
Standard Error of Estimate	2.4825
F (2,20)	489.805
Sig.	< .001

The regression coefficients show that vocabulary mastery significantly predicted writing ability ($B = .538$, $t = 3.917$, $p = .001$). Grammatical competence also significantly predicted writing ability ($B = .432$, $t = 3.269$, $p = .004$). Based on the unstandardized coefficients, vocabulary mastery made a slightly stronger contribution to writing ability than grammatical competence. The regression equation was: Writing ability = $7.513 + .538(\text{Vocabulary mastery}) + .432(\text{Grammatical competence})$.

Table 5. Regression Coefficients

Predictor	B	Standard Error	Beta	t	Sig.
Constant	7.513	2.046	-	3.672	.002
Vocabulary mastery	.538	.137	.543	3.917	.001
Grammatical competence	.432	.132	.453	3.269	.004

Discussion

The results of this study show that vocabulary mastery and grammatical competence both had a significant influence on students' writing ability. This finding supports the view that writing is not a stand-alone skill. Students with wider vocabulary and better grammatical competence can generally write better because they have more word choices and can construct sentences more accurately.

The significant influence of vocabulary mastery is consistent with recent studies showing that vocabulary has an important role in writing quality. Allagui et al (2024) found that vocabulary size was positively related to the quality of summary writing. Meanwhile, Qasem et al (2021) stated that vocabulary mastery significantly influenced the writing ability of EFL students in Indonesia. In this study, vocabulary mastery had a slightly higher coefficient than grammatical competence. This shows that, for the students in this study, the ability to choose the right word was an important factor in completing written texts. Students with limited vocabulary may understand the general meaning of a sentence, but they may have difficulty completing the text correctly because they cannot choose the word that best fits the context.

This finding was also supported by the classroom observation. Students at SMK Hikmah Yapis Jayapura had difficulty writing descriptive texts because many of them could only produce short sentences, used Indonesian words, and did not yet have enough English vocabulary. In this situation, vocabulary becomes an important foundation for helping students write. If students do not have the words needed to express ideas, they will have difficulty developing their writing even if they already have some grammar

knowledge. Therefore, vocabulary development needs serious attention in writing instruction.

Grammatical competence was also shown to be a significant factor that influenced writing ability. This result is consistent with Sunarsih et al (2024), who found a significant relationship between grammar mastery and writing results. This finding is also in line with Marjokorpi (2023), who stated that grammar and vocabulary together influenced students' essay writing skills. Grammar helps students arrange words into clear and meaningful sentences (Fitrianingsih, 2016). If students do not master grammar well, their writing can be difficult to understand even when the ideas they want to express are already in their minds (Visakha, J. A. 2019). Therefore, grammar instruction needs to be directly connected to writing practice.

The results of this study are also consistent with recent findings on EFL writing difficulties in Indonesia. Mubarok (2022) found that linguistic problems were a main challenge in writing for Indonesian EFL students, with grammar as one of the most serious problems. Amelia (2023) also found that grammar was one of the lowest-scoring aspects of students' descriptive writing. These findings show that grammar is still a real classroom problem, especially for students at the secondary education level. However, grammar instruction should not focus only on memorizing rules (Peterson et al 2018). Students need opportunities to use grammar in meaningful writing practice, revise their sentences, and understand how grammar improves the clarity of writing.

Another important finding in this study is the strong correlation between vocabulary mastery and grammatical competence. This can be understood because both are parts of students' language ability. Students with better vocabulary tend to have more exposure to language patterns. On the other hand, students with better grammatical competence may read and practice English more often, which increases their vocabulary. From a statistical perspective, this very strong relationship shows that the regression results need to be interpreted carefully. The research model shows a strong predictive relationship, but it cannot be treated as evidence of a cause-and-effect relationship as in experimental research. Instead, this study shows that lexical and grammatical competence are meaningful indicators of writing ability in this particular classroom context.

The very high R^2 value also needs to be interpreted carefully. Although this value shows that vocabulary mastery and grammatical competence explained most of the variance in the writing test, the writing instrument used in this study was a maze-based task. Because the task required students to choose the correct words to complete a text, the results naturally depended heavily on vocabulary and grammar. Therefore, the model's strong predictive value can be understood, but the results might be different if writing ability were measured through free composition, paragraph writing, or genre-based writing scored with a rubric. Future studies need to use broader writing assessment formats so that content, organization, and communicative purpose can be measured more fully.

Although this study has several limitations, the results still provide benefits for EFL instruction in vocational high schools. First, English teachers need to integrate vocabulary development into writing instruction. Vocabulary can be taught through activities that fit the context, such as making word maps, completing sentences, arranging paragraphs, and writing texts with teacher guidance. Second, grammar needs to be taught as a tool to help students communicate meaning more clearly. Students need practice using grammar to construct good sentences, connect ideas, and correct inaccurate writing. Third, writing assessment should not focus only on students' final written products. It also needs to

consider students' weaknesses in vocabulary and grammar so that teachers can design more focused support.

This study is also relevant to current English instruction in Indonesia. The 2021/2025 orientation of English instruction emphasizes students' ability to produce written texts for different purposes and audiences. To reach this goal, teachers need to help students build the linguistic foundation needed for written communication. In vocational high schools, this foundation becomes even more important because students are expected to use English in practical and professional contexts. Strengthening vocabulary and grammar through writing activities can support both academic and vocational communication.

Finally, this study provides local evidence from Jayapura, Papua, a context that is still relatively underrepresented in research on EFL writing in Indonesia. The value of this study does not lie in claiming a new phenomenon, but in explaining how the two main linguistic variables work in a particular vocational high school context. This kind of local evidence can help teachers and researchers understand that the development of EFL writing ability is shaped not only by general theories but also by specific classroom realities.

Conclusion

This study examined vocabulary mastery and grammatical competence as factors that can influence the writing ability of EFL students at SMK Hikmah Yapis Jayapura. The results show that vocabulary mastery and grammatical competence both had a significant influence on students' writing ability, both separately and together. Vocabulary mastery had a slightly stronger influence than grammatical competence. This shows that vocabulary knowledge is very important in helping students improve their writing ability.

These findings show that writing instruction in vocational high schools needs to integrate vocabulary and grammar development into meaningful writing practice. Teachers should not teach vocabulary and grammar as separate and mechanical components. Instead, students need guidance to use vocabulary and grammar when constructing sentences, developing paragraphs, and expressing ideas clearly. This study also emphasizes the importance of identifying students' linguistic weaknesses before asking them to produce longer written texts.

This study has several limitations, including the small sample size, the use of purposive sampling, and the use of a maze-based writing test. Therefore, the findings need to be interpreted carefully and cannot be directly generalized to a wider population. Future studies are advised to use larger samples, compare students from different vocational high school programs, and use more comprehensive writing assessments, such as paragraph or essay writing scored with a rubric. In addition, future studies can examine other factors that may influence writing ability, such as reading habits, motivation, writing anxiety, feedback, and the use of digital technology in writing activities.

References

- Adisutrisno, D. (2008). Multiple choice English grammar test items that aid English grammar learning for students of English as a foreign language. *K@ta*, 10(1), 36–52. <https://doi.org/10.9744/kata.10.1.36-52>
- Alfiansyah, S. F. N. (2020). Hubungan penguasaan kosakata dan penguasaan kalimat efektif dengan keterampilan menulis esai siswa SMA Negeri Cigudeg Bogor.

- Lingua Journal*, 1(1), 60–71.
<https://journal.umbogorraya.ac.id/index.php/Lingua/article/view/270/195>
- Allagui, B., & Al Naqbi, S. (2024). The Contribution of Vocabulary Knowledge to Summary Writing Quality: Vocabulary Size and Lexical Richness. *Tesl-Ej*, 28(1), n1.
- Amelia, R., & Indrawati, I. (2023). The Correlation between Students' Grammar Mastery and Their Writing Ability in Descriptive Text. *EEdJ: English Education Journal*, 3(2), 47-55.
- Anaktototy, K., Sekawael, M., Latief, M. R. A., & Bin-Hady, W. R. A. (2023). Beyond Linguistics: Exploring the Cognitive and Motivational Barriers to Essay Writing for Tertiary Students. *International Journal of Language Education*, 7(3), 447-468.
- Asaad, H. Q. M., & Shabdin, A. A. (2021). The predictive role of morphological awareness and productive vocabulary knowledge in L2 postgraduate students' academic writing. *Eurasian Journal of Applied Linguistics*, 7(1), 24-44.
- Bani, F. L., Nurhikma, N., Nensiliati, N., & Amir, J. (2025). Kesalahan berbahasa pada teks karangan siswa SMA-SMK Kota Makassar. *DEIKTIS: Jurnal Pendidikan Bahasa dan Sastra*, 5(4), 5207-5216.
- Diarani, N., & Syamsi, K. (2019). The contribution of the reading habit, vocabulary mastery, and grammar to the experience writing skill of 5th grade students of state elementary schools. *Jurnal Prima Edukasia*, 7(1), 28-39.
- Fitrianingsih, F. (2016). Peningkatan kemampuan siswa menyusun kalimat melalui teknik acak kata di kelas II SDN Malangga Selatan Tolitoli. *Jurnal Kreatif Tadulako*, 4(10).
- Hu, T., & Chou, Y. (2022). Relative roles of grammar knowledge and vocabulary in the reading comprehension of EFL elementary-school learners: Direct, mediating, and form/meaning-distinct effects. *Frontiers in Psychology*, 13, Article 827007. <https://doi.org/10.3389/fpsyg.2022.827007>
- Imawati, E. (2017). Pengaruh pembelajaran berbasis teks terhadap kemampuan menulis teks deskriptif. *Literasi: Jurnal Bahasa dan Sastra Indonesia serta Pembelajarannya*, 1(1), 53-63.
- Isma, A., & Rasmin, L. O. (2023). Decoding the challenges: A study of English writing errors among EFL students. *[Nama jurnal tidak tersedia]*, 1(1), 1–9.
- Lesmana, N., & Ariffin, K. (2020). Problems in writing scholarly articles in English among Indonesian EFL post-graduate students. *International Journal of Academic Research in Progressive Education and Development*, 9(4), 12–24. <https://doi.org/10.6007/IJARPED/v9-i4/8174>
- Loita, A., Aprily, N. M., [penulis lain tidak lengkap]. (2023). Maze game in improving writing ability in early childhood. *[Nama jurnal tidak tersedia]*, 2(2), 905–909.
- Manurung, R., Sitohang, T., Gusar, M. R. S., Girsang, N. P., & Purba, E. R. (2025). An analysis of learning difficulties in Indonesian language among elementary, junior high, and senior high school students. *SIBATIK Journal: Jurnal Ilmiah Bidang Sosial, Ekonomi, Budaya, Teknologi, dan Pendidikan*, 4(8), 2157–2166.
- Marjokorpi, J. (2023). The relationship between grammatical understanding and writing skills in Finnish secondary L1 education. *Reading and Writing*, 36(10), 2605–2625. <https://doi.org/10.1007/s11145-022-10405-z>
- Mubarok, Y. (2022). An error analysis on EFL students' writing. *English Journal*, 9(2), 187–203. <https://doi.org/10.22373/ej.v9i2.11386>
- Nurdianingsih, F., Fitriati, S. W., Astuti, P., & Rozi, F. (2024). Writing difficulties faced by EFL writing learners of English education study program. *Proceedings of Fine Arts, Literature, Language, and Education*, 461-476.

- Peterson, A., Dumont, H., Lafuente, M., & Law, N. (2018). Understanding innovative pedagogies: Key themes to analyse new approaches to teaching and learning. *OECD education working papers*.
- Rahmah, N., Tahir, M., & Talib, A. (2023). The effect of vocabulary mastery on students' reading comprehension. *International Journal of Business English and Communication*, 1(1), 36-44.
- Santosa, P. P. P. (2017). Hubungan antara penguasaan tata bahasa dengan keterampilan menulis narasi bahasa Inggris Siswa Kelas XI SMK Negeri 2 Depok. *Deiksis*, 9(02), 182-193.
- Sunarsih, E., Aprianti, T., & Yanti, L. (2024). Hubungan antara penguasaan tata bahasa Indonesia dengan kemampuan menulis teks eksposisi pada siswa kelas X. *Jurnal Pendidikan Bahasa*, 13(1). <https://doi.org/10.31571/bahasa.v13i1.6695>
- Visakha, J. A. (2019). Pengaruh Penguasaan Kosakata dan Tata Bahasa Terhadap Kemampuan Menulis Teks Deskriptif Bahasa Inggris. *INFERENCE: Journal of English Language Teaching*, 2(1), 68-79.
- Yuhariah, F., & Sujarwati, I. (2023). The correlation between high school students' vocabulary mastery and writing ability. *Pedagonal: Jurnal Ilmiah Pendidikan*, 7(2), 113-123. <https://doi.org/10.55215/pedagonal.v7i2.6649>