

GRAMMARLY'S EFFECTIVENESS IN ENHANCING ENGLISH WRITING: A CASE STUDY OF VOCATIONAL HIGH SCHOOL STUDENTS

Selma Damayanti¹

¹Tarbiyah Faculty, Institut Agama Islam Negeri Madura, Indonesia
(selmadamayanti03@gmail.com)

Siti Azizah²

²Tarbiyah Faculty, Institut Agama Islam Negeri Madura, Indonesia
(siti.azizah@iainmadura.ac.id)

Abstract: *Many vocational high school students in Pamekasan, Indonesia, face difficulties in understanding and applying basic grammar rules, which leads to poor writing skills. Despite the increasing use of Automated Writing Evaluation (AWE) tools like Grammarly, there is limited research on their effectiveness in vocational educational settings. To address this gap, the study aims to evaluate the impact of Grammarly on improving the English writing skills of tenth-grade vocational students, focusing on areas where it offers the most significant benefits. A quantitative pre-experimental design, involving pre-tests and post-tests, was used to assess changes in students' writing proficiency, with descriptive statistics and t-tests employed for data analysis. The findings revealed that Grammarly significantly enhanced students' grammar and punctuation accuracy, though no substantial improvement was observed in overall writing quality. However, the tool proved effective in helping students identify and correct common errors, improving the clarity and coherence of their writing. Further research is recommended to explore the long-term effects of AWE tools like Grammarly in various educational contexts.*

Keywords: *Automated Writing Evaluation; English Text; Grammarly*

First Received:
(June 2, 2024)

Final Proof Received:
(September 29, 2024)

INTRODUCTION

Writing is a complex skill for English language learners, especially due to the grammatical and structural differences between their native language and English. Learners often struggle with writing, particularly in foreign languages, due to unfamiliar grammatical structures and limited vocabulary (Muamaroh, 2020). Effective writing hinges on strong grammar structure, requiring learners to grasp the target language's grammatical rules. Incorrect grammar can hinder communication and make it difficult for readers to comprehend your writing. Therefore, mastering English grammar is crucial for producing high-quality work (Ananda, Nisa, & Safura, 2021).

Today's teaching and learning process cannot be separated from technology, and the development of this technology makes teaching and learning activities easier to do. The

rapidly developing technology has a significant impact on everyone, especially students (Ghufron & Rosyida, 2018). In this sophisticated era, students need unique and interesting learning media to help them understand the material or help improve their abilities. They chose to use methods that are considered easier way and more practical, such as using videos or applications that help them to learn. Many programs support language learners in expanding their knowledge to learn languages more easily independently—for example, an English writing correction or evaluation application. Automated Writing Evaluation (AWE) software advancement allows language learners to obtain assessments on language usage and content alongside automated scoring (Dewi, 2022). In addition, Grammarly can assist students and teachers in proofreading English foreign language writing and help teachers and students become better writers (Tambunan, 2022).

Today, students can use many English software tools to manage their learning. Grammarly is a tool that can be used to write foreign languages. This tool helps teachers assess student progress and improves students' writing skills. Grammarly is an easy tool that is highly beneficial for both students and educators in the realm of writing is enhanced by identifying and rectifying spelling, grammar, and punctuation errors, resulting in improved readability, clarity, precision, effectiveness, and accuracy, ensuring it is error-free (Nova, 2018).

This study investigates the effectiveness of Grammarly as an automated writing evaluation (AWE) tool in enhancing the English writing skills of tenth-grade students at SMKN 1 Pamekasan, Indonesia. In the pre-observation conducted by researchers, students of SMKN 1 Pamekasan only used Google Translate and YouTube as tools for learning English. Students are unfamiliar with AWE and other applications that can help them learn English. Students in this school rarely study English in detail. They focus more on their respective majors, such as accounting, banking, management, etc. Therefore, they are unfamiliar with AWE and other aids.

While previous research has explored the potential of AWE tools in language learning, limited studies have specifically focused on their impact in vocational educational settings, particularly in developing countries. In a vocational school setting, English is used as a compulsory language to develop communication skills and optimize competencies that will be useful for their future careers (Khumaeroh, 2024). However, students focus less on the structure of their English writing. Studies evaluating the specific impact of Grammarly on different aspects of writing skills, such as structure and style, are lacking. The existing literature often does not delve into the impact of Grammarly on specific aspects of writing, such as grammar usage, word choice, and sentence structure. Grammarly helps students edit their writing by checking potential writing issues with grammar, spelling, punctuation, and vocabulary suggestions (Dewi, 2022). Understanding how Grammarly can assist in these areas is critical to improving students writing skills in vocational education. Existing research on AWE tools in language learning has primarily focused on feedback on writing

(Zhang, 2019). In fact, Grammarly claims its ability to provide correct and reliable instant feedback for different aspects of writing, including correctness and clarity (Qub'a, 2024). The product uses artificial intelligence to offer automatic feedback based on established linguistic principles and algorithms to rectify grammatical errors (Arisandi, 2023). The development of technology in education, especially in English as a foreign language education, combined with AI, has provided solutions that make it possible to improve input, processes, and outcomes of teaching and learning (Armanda, 2022). However, studies on the broader impact of these tools on overall writing proficiency and their applicability in diverse educational contexts are still emerging. A fundamental gap in the literature is the lack of research on AWE tools in vocational education settings. While there is growing recognition of the importance of English language skills for vocational students, only some studies have examined the specific challenges they face and the potential benefits of technology-based intervention.

This study aims to address these gaps by investigating the effectiveness of Grammarly in improving the English writing skills of tenth-grade vocational students in Indonesia. By examining the impact of Grammarly on various writing components, this study contributes to the growing body of research on AWE tools in language learning.

This study examines two research inquiries:

1. Do the students have better writing skills after using Grammarly as an automated writing evaluation tool?
2. Is Grammarly effective as an automated writing evaluation tool for writing English texts for tenth-grade students at SMKN 1 Pamekasan?

LITERATURE REVIEW

Grammarly

Grammarly is a free AI writing assistance application founded by Max Lytvyn, Dmytro Lider, and Alex Shevchenko in 2009. It is headquartered in San Francisco, California, United States. The Grammarly is an online application designed to assist users in rectifying writing errors. Grammarly, also called an automatic writing evaluation tool, this application is specifically for correcting writing errors in English. These errors can be in the form of spelling errors, punctuation errors, vocabulary errors, and many more features that Grammarly can provide. Grammarly suggests correct word replacements for incorrect words within English sentences, but we are given the choice of whether to accept the suggestion (Hasan, 2022). Grammarly can be included in the Microsoft Word application, simplifying the process of checking writing errors in English language structure and providing an internet connection. Grammarly divides errors into six categories: contextual spelling, grammar, punctuation, sentence structure, style, and vocabulary enhancement. It tallies and displays the number of errors in each category (O'Neill & Russell, 2019).

Automated Writing Evaluation (AWE)

Automated Writing Evaluation is a tool used to assist the learning process. The application or device corrects English writing automatically. This automatic writing check can also be called a learning media or instructional media. Automated writing evaluation tools enable students can access live scores and receive written corrective feedback through Grammarly. These scores and feedback are often deemed more objective and consistent than human evaluations. (Miranty & Widiati, 2021). Nowadays, teachers are challenged to think creatively, especially when teaching. As in distance or online learning, more often use instructional media. They must be able to take advantage of technology and make it an instructional medium that helps students understand learning material well and is also interesting (Holden & Westfall, 2008).

Grammarly's availability as an educational tool or automated writing evaluation tool can stimulate student interest in learning because it eliminates the necessity to memorize all grammar rules and formulas. This finally made the researchers interested in conducting further observations regarding the relationship between technology and student learning, with experiments using Grammarly as an automated writing evaluation tool.

METHOD

This study employed a quantitative pre-experimental design to investigate the impact of Grammarly on the English writing skills of tenth-grade students at SMKN 1 Pamekasan. A single group of students participated in the study, receiving a pre-test before and a post-test after using Grammarly. The participants in this study were tenth-grade students at SMKN 1 Pamekasan during the 2023/2024 academic year. A total of 19 students from class X AKT were included in the study. While random sampling was initially considered, the final sample was selected based on recommendations from school administrators and teachers due to logistical constraints and the need to ensure a representative group. Data collection involved administering a pre-test and a post-test to measure students' English writing skills. The tests included writing prompts to assess grammar, punctuation, and overall writing quality. Grammarly was used by students between the pre-test and post-tests to identify and correct errors in their writing.

Descriptive statistics were used to analyze the quantitative data, including mean scores, minimum and maximum values, and standard deviation. An independent t-test was conducted to determine if there was a significant difference between pre-test and post-test scores. The significance level was set at $\alpha = 0.05$ (two-tailed). The validity and reliability of the test instruments were assessed to ensure the accuracy and consistency of the data collected. They have already consulted with experts in the field. Ethical considerations were addressed throughout the study. Informed consent was obtained from all participants, and their privacy and confidentiality were protected. The study adhered to ethical guidelines established by relevant research institutions.

To address internal and external validity concerns, the pre-test-post-test design with a single group limits the ability to establish strong causal relationships. To address this, the study controlled for extraneous variables by conducting the intervention in a standardized setting and providing clear instructions to participants. Furthermore, the generalizability of the findings is limited due to the small sample size and the study's specific context. However, the results can provide insights into the potential benefits of AWE tools in similar settings.

RESULTS AND DISCUSSION

Results

This research aims to determine whether students' writing skills improve after using Grammarly to write descriptive texts in class X AKT. Data were collected through a test and documentation. The test was primarily used to determine students' abilities regarding the effectiveness of descriptive writing assignments without using Grammarly and after using Grammarly, while documentation served as an additional tool to validate the results obtained from the tests. Both data sets were analyzed to answer the research questions at hand. To see the test results, see Table 1.

Table 1.
Descriptive Statistics of the Pre-Test and Post-Test Scores

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test	19	62	93	83.00	8.320
Post-test	19	80	98	92.53	5.253
Valid N (listwise)	19				

Table 1 displays that the students' mean score in the pre-test was 83.00, while in the post-test, it was 92.53. The score indicates that the post-test mean score was higher than the pre-test mean score. It can be concluded that utilizing Grammarly as an automated writing evaluation tool effectively enhances students' writing skills, particularly in writing descriptive texts.

Furthermore, the paired sample statistics of the pre-test and post-test are presented in Table 2 and Table 3 below.

Table 2.
The Paired Sample Statistics of the Pre-Test and Post-Test Scores

	Mean	N	Std. Deviation	Std. Error Mean
Pre-test	83.00	19	8.320	1.909
Post-test	92.53	19	5.253	1.205

Table 2 indicates that the standard deviation for the pre-test was 8.320, and for the post-test was 5.253. Additionally, it reveals that the standard error mean of vocational students for the pre-test was 1.909 and the standard error mean of vocational students for

the post-test was 1.205. Table 2 also demonstrates that the mean score of the pre-test was 83.00, and the mean score of the post-test was 92.53. From this, it can be inferred that the student scores became better or improved significantly from 83.00 to 92.53.

Table 3.

The Paired Sample Correlations of the Pre-Test and Post-Test Scores

	N	Correlation	Sig.
Pre-test & Post-test	19	.733	<.001

Table 3 represents the correlation coefficient between students' competency before and after treatment, which was changed to 733, indicating a significant correlation between students' competency in writing descriptive text using Grammarly before and after treatment.

Table 4.

T-Test of the Paired Samples Test of Pre-Test and Post-Test Scores

	Paired Differences							
	95% Confidence Interval of the Difference							
	Mean	Std. Deviation	Std. Error	Lower	Upper	t	df	Sig. (2-tailed)
Pre-test	-9.526	5.719	1.312	-12.283	-6.770	-7.261	18	<.001
Post-test								

In the Table 4 result, the significance value (2-tailed) of $0.001 < 0.05$. Therefore, the null hypothesis (H_0) was rejected, and the alternative hypothesis (H_a) was accepted. This implies a common difference among the pre-test and post-test learning results, indicating the influence of using Grammarly as an automatic writing evaluation tool in enhancing the ability to write English text at SMKN 1 Pamekasan.

The "Mean Paired Differences" value of -9.526 indicates the average difference between the pre-test learning results and the post-learning results or $83.00 - 92.53 = -9.526$, and the difference is between -12,283 to -6,770 (95% Confidence Interval of Bottom and Top Difference). In this case, despite the negative value of the t-count (-7.261), it signifies that the average value of the pre-test learning results is indeed lower than the post-test learning results. This negative t value holds a positive meaning in this context, indicating a significant difference between the two results sets. Therefore, the calculated t-value remains at 7.261.

In the paired samples test of pre-test and post-test, the researchers got the data t_0 (t count) = -7,261 or 7,261 and df (degree of freedom) = 18. Based on the table distribution of t_t (t table) = 2,101, it was the standard of significant 0,05 ($\alpha / 2 = 0,05 / 2 = 2,101$), with the degree of freedom $n(df) = 18$. Based on the result, it is concluded that t_0 was higher than t_t (t table) $t_0 \geq t_t$ $7,261 \geq 2,101$.

Related to the result that ($t_0 \geq t_t$) the t count changes into higher than the t table, it means that the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. This conclusion indicates a significant difference in writing descriptive text when utilizing the Grammarly application compared to not using it. Because of that, the researchers believed that utilizing the Grammarly application was effective in enhancing the writing skills of tenth-grade students in descriptive text.

Discussion

The findings of this study demonstrate the effectiveness of Grammarly as an automated writing evaluation tool in enhancing the English writing skills of tenth-grade students at SMKN 1 Pamekasan. From the test result, it was found that the t-count (t_0) is higher than the t-table, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. This indicates a significant difference in the descriptive text writing skills between students who use the Grammarly application and those who do not. The significant increase in students' average writing scores from the pre-test to the post-test, coupled with improvements in specific writing components such as format, punctuation, mechanics, content, organization, and grammar, strongly suggests that Grammarly can be a valuable tool for supporting language learners. In addition, Halim stated that Grammarly is one of the online grammar checkers that can help students or academies in their writing by checking spelling, grammar, and punctuation errors and providing comprehensive and useful feedback (Halim, 2022).

Within the pre-test, students exhibited weaknesses primarily in grammar and mechanics. Many students scored low, indicating numerous grammatical errors in expressing their ideas; as shown in Table 1, the average score of students in the pre-test was 83.00. Additionally, they needed to gain more vocabulary and articulate their opinions. Some errors observed included spelling, punctuation, capitalization, and paragraphing. Moreover, in the post-test, the students' weaknesses decreased. It could be seen in students' scores in the post-test in 5 components of this test. However, based on students' writing, the researchers conclude that no student gets an "average" score. Nearly all students showed improvement in their scores for each component. However, after being given action and explained how to use Grammarly, students experienced an improvement in the second test or post-test. As shown in the table, the student's post-test score was 92.53, which means that the student experienced improvement after using Grammarly.

One of the key advantages of Grammarly is its ability to provide real-time feedback on students' writing, allowing them to identify and correct errors as they write. Grammarly is effective in helping students write because of several features that can improve writing directly. With scoring functions built into these AWE systems, holistic scores on the overall writing quality and analytic scores on particular features or traits, such as grammar, mechanics, and organization, are usually available to students (Zhi, 2021). The students can

do it directly at school, using a mobile phone, laptop, or computer because Grammarly can be accessed easily and at any time (Maypida & Sukma, 2024). This continuous feedback can help students better understand grammatical rules and improve their overall writing accuracy. Additionally, Grammarly's suggestions for alternative vocabulary and phrasing can encourage students to be more creative and confident in their writing.

Writing is a complex cognitive process requiring strategic planning, organization, grammar, and vocabulary skills (Fahreza, 2017). English teachers should be able to choose the most appropriate teaching media for the students, emphasizing the crucial role of selecting suitable teaching media in writing instruction. Teaching media, such as digital tools, textbooks, or interactive platforms, can significantly influence students' engagement and learning outcomes. Effective media should align with students' learning styles, the material's complexity, and the lesson's specific goals. In this context, the researcher suggests that the choice of media is not just a matter of preference but a strategic decision that can impact educational effectiveness. Grammarly is an advanced writing assistant that provides real-time grammar, spelling, punctuation, and style feedback. By integrating Grammarly into the teaching process, English teachers can offer students immediate and specific corrections, which helps them understand and rectify their writing errors. The tool's suggestions can also be a learning aid, promoting self-correction and improvement over time. The researchers found that using Grammarly effectively improved tenth-grade students' writing skills, particularly in writing descriptive texts. This effectiveness can be attributed to several factors:

1. Immediate Feedback: Grammarly provides instant corrections and explanations, which helps students quickly understand their mistakes and learn the correct usage.
2. Learning Reinforcement: Regular use of the tool allows students to reinforce their learning through practice, leading to gradual improvement in writing quality.
3. Focus on Details: Grammarly helps students pay attention to finer details of writing, such as sentence structure and word choice, which are essential for producing well-written descriptive texts.

Based on the explanation provided, the researchers conclude that employing Grammarly as an automated writing evaluation tool effectively enhances the quality of students writing in English text, particularly descriptive text. The students become confident learning and writing English because there are applications that help them correct their mistakes. For future researchers, we could investigate the long-term effects of using Grammarly on students' writing skills over an extended period and conduct studies comparing Grammarly with other AWE tools to determine which features are most beneficial in various contexts.

CONCLUSION

The findings of this study demonstrate that Grammarly can be an effective tool for enhancing the English writing skills of vocational high school students. Students who used Grammarly exhibited significant improvements in their writing proficiency, particularly in terms of grammar and punctuation accuracy. These positive outcomes suggest that incorporating digital tools like Grammarly into English language instruction can be a valuable addition to traditional teaching methods. However, educators must guide students on using these tools effectively and balance their use with other instructional approaches. To further explore the effectiveness of Grammarly as an automated writing evaluation and other writing assistance tools, future research could focus on comparative studies to identify their unique advantages and limitations. Additionally, investigating students' and teachers' perceptions of these tools can provide valuable insights into their experiences, challenges, and suggestions for improvement. Examining the long-term impacts of using Grammarly on students' English writing skills and overall language proficiency is another critical area for future research. Furthermore, exploring how contextual factors such as student background, teacher training, and school resources influence the effectiveness of Grammarly in different educational contexts can provide valuable insights for educators and policymakers.

REFERENCES

- Aisyah, S., & Haryudin, A. (2020). Instructional Media Used in Teaching English. *PROJECT (Professional Journal of English Education)*, 3(6), 737-742. <https://doi.org/10.22460/project.v3i6.p737-742>
- Ananda, M., Nisa, R., & Safura, S. (2021). Students' Perceptions toward the Use of Grammarly in Checking Grammar in Assignments. *ACCENTIA: Journal of English Language and Education*, 1(2), 72-77. <https://doi.org/10.37598/accentia.v1i2.1144>
- Amalia, M & Emeliya, S. (2024). Exploring Grammarly's Effectiveness in EFL Writing through a Student Perception Study. *Journal of Educational Development* 12(2), 98-107. <https://journal.unnes.ac.id/journals//jed>
- Arisandi, V., & Sudarajat, A. (2023). Revisiting "Grammarly" in Higher Education: A Literature Review. *JIRK Journal of Innovation Research and Knowledge*, 2(8), 3351-3356. <https://doi.org/10.53625/jirk.v2i8.5461>
- Armanda, M., Nugraheni, A., Imron, A., & Wulansari, A. (2022). "Grammarly" as an English writing assistant from EFL students' perspective. *Journal of English Teaching and Research*, 7(2), 128-137. <https://doi.org/10.29407/jetar.v7i2.17988>.
- Dewi, U. (2023). Grammarly as Automated Writing Evaluation: Its Effectiveness from EFL Students' Perceptions. *Lingua Cultura*, 16(2), 155-161. <https://doi.org/10.21512/lc.v16i2.8315>
- Fauzi, F., Erna, M., & Linda, R. (2021). The Effectiveness of Collaborative Learning Throughtechniques on Group Investigation and Think Pair Share Students' Critical Thinking Ability on Chemical Equilibrium Material. *Journal of Educational Sciences*, 5(1), 198-208. <https://doi.org/10.31258/jes.5.1.p.198-208>

- Ghufron, M. A., & Rosyida, F. (2018). The Role of Grammarly in Assessing English as a Foreign Language (EFL) Writing. *Lingua Cultura*, 12(4), 395-403. <https://doi.org/10.21512/lc.v12i4.4582>
- Halim, A., Sharina, S., & Zur, S. (2022). Grammarly as a Tool to Enhance Students' Self-Directed Learning. *KnE Social Sciences*, 7(8). <https://doi.org/10.18502/kss.v7i8.10719>
- Hasan, D. (2022). The Use of the Grammarly Application to Improve Students' Grammar Mastery at SMAN 18 Makassar. *Thesis, Bosowa University*. <https://repository.unibos.ac.id/xmlui/handle/123456789/1797>
- Holden, J. T., & Westfall, P. J. (2008). *Instructional Media Selection Guide for Distance Learning*. 1-36.
- Khumaeroh, R. (2024). Students' Perception of Peer-Video Recording Task in the Vocational High School in Cirebon. *PANYONARA: Journal of English Education*, 6(1), 42-57. <https://doi.org/10.19105/panyonara.v6i1.11040>
- Miranty, D., & Widiati, U. (2021). Automated Writing Evaluation (AWE) in Higher Education: Indonesian EFL Students' Perceptions about Grammarly Use across Student Cohorts. *Pegem Egitim ve Ogretim Dergisi*, 11(4), 126-137. <https://doi.org/10.47750/pegegog.11.04.12>
- Miranty, D., Widiati, U., Cahyono, B. Y., & Sharif, T. I. S. T. (2022). The Effectiveness of Using Grammarly in Teaching Writing Among Indonesian Undergraduate EFL Students. *Proceedings of the International Seminar on Language, Education, and Culture (ISoLEC 2021)*, 612(ISoLEC), 41-45. <https://doi.org/10.2991/assehr.k.211212.008>
- Muhammad, F., Z. A. A., & N. I. (2017). The Use of Weblog in Improving Students' Writing Skills. *Linguistics, English Education and Art (LEEA) Journal*, 6(1), 192-199. <https://doi.org/10.31539/leea.v6i1.5063>
- Muamaroh, Cahya, V., & Haryanti, D. (2020). The Process and Problems of EFL Learners in English Writing: A Case Study in International Class. *Ethical Lingua*, 7(2), 405-418. <https://doi.org/10.30605/25409190.215>
- Nova, M. (2018). Utilizing Grammarly in Evaluating Academic Writing: A Narrative Research on Efl Students' Experience. *Premise: Journal of English Education*, 7(1), 80-96. <https://doi.org/10.24127/pj.v7i1.1332>
- O'Neill, R., & Russell, A. M. T. (2019). Stop! Grammar Time: University Students' Perceptions of the Automated Feedback Program Grammarly. *Australasian Journal of Educational Technology*, 35(1), 42-56. <https://doi.org/10.14742/ajet.3795>
- Qub'a, A., Guba, M & Fareh, S. (2024). Exploring The Use of Grammarly in Assessing English Academic Writing. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2024.e34893>
- Tambunan, A., Andayani, W., Sari, W., & Lubis, F. (2022). Investigating EFL Students' Linguistic Problems Using Grammarly as Automated Writing Evaluation Feedback. *Indonesian Journal of Applied Linguistics*, 12(1), 16-27. <https://doi.org/10.17509/ijal.v12i1.46428>
- Zhang, Z. (2019). Engaging With Automated Writing Evaluation (AWE) Feedback on L2 Writing: Student Perceptions and Revisions: Student Perceptions and Revisions. *Assessing Writing*, 43, 100439. <https://doi.org/10.1016/j.asw.2019.100439>