



THE USE OF AI-BASED WRITING TOOLS (QUILLBOT AND CHATGPT) IN DEVELOPING THE WRITING COMPETENCE OF LANGUAGE LEARNERS

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ABSTRACT

The study explored the impact of AI-based writing tools, namely QuillBot and ChatGPT, on enhancing the writing competence of students enrolled in the English for Business Writing course within the D4 Marketing Management program at Politeknik Negeri Malang. Employing a descriptive qualitative approach, data were collected through a series of pre-tests and post-tests to assess changes in students' writing performance. The findings demonstrated a marked improvement across various writing components, with average scores consistently exceeding 3.0. ChatGPT played a pivotal role in facilitating idea generation and structuring written texts, while QuillBot proved effective in refining grammatical accuracy, spelling, and vocabulary usage. When used in tandem, these tools significantly improved the content quality, coherence, and overall organization of students' writing. The study recommends the sustained integration of these AI-powered applications alongside systematic writing practice and constructive teacher feedback. Moreover, it offers practical insights for language educators seeking to leverage artificial intelligence to support and enhance learners' writing development.

Keywords: *Artificial Intelligence, ChatGPT, Quillbot, Writing Skills, Language*

1. INTRODUCTION

Language learners, particularly those in English for Academic Purposes (EAP) or English for Specific Purposes (ESP) contexts, often express concern that the limited instructional time in writing classes is inadequate for mastering English writing skills. Many students report that having only ninety minutes of class per week does not provide sufficient opportunity for them to improve their writing competence. Consequently, they require additional time and practice outside the classroom to further enhance their skills. Writing competence encompasses not only grammar but also cognitive and judgmental elements. Numerous learners still struggle with basic components such as grammar, punctuation, capitalization, and spelling. These recurring errors reflect

broader deficiencies in overall language ability. Moreover, vocabulary plays a fundamental role in producing coherent and effective writing.

Language learners in ESP settings frequently require targeted support to enhance their command of English and its application in writing. Teachers must implement more effective strategies and provide increased opportunities for writing practice. Students also need structured support to build their foundational writing skills, which include vocabulary acquisition, grammatical accuracy, sentence construction, and spelling. In many Indonesian vocational higher education settings, non-English majors, especially those studying business or administration, often encounter obstacles in English writing due to

Vol 8, No 2 (2025): ESTEEM

their limited exposure to the language and their status as non-native speakers.

In recent years, the integration of technology in education has enabled learners to make notable progress. Artificial intelligence (AI) holds significant promise in this area by offering personalized diagnostics, identifying at-risk learners, and enabling timely intervention. In particular, AI has become increasingly relevant in language education. It supports English language teaching by providing dynamic feedback, customized assistance, and learner-specific content. The growing field of Technology-Enhanced Language Learning (TELL) has explored diverse technological tools to optimize language instruction. However, one of the major challenges has been addressing the variation in learning outcomes among students of differing proficiency levels (Kamarullah et al., 2024; Rohmawati, 2021; Zou et al., 2023; Wei, 2023). The use of AI-driven personalized learning systems, built on machine learning and data analytics, can help bridge these gaps. Such platforms enable lower-proficiency students to progress at a pace that matches their learning needs (Syarifah & Fakhruddin, 2024; Paludo & Montesor, 2024; Rashidin et al., 2022; Anik et al., 2021; Tran et al., 2024). Moreover, while many traditional language tools lack authentic interaction and real communication practice, AI-powered tools offer more contextualized, user-oriented learning environments.

Several studies have examined the effects of AI writing tools on language learners' writing development. Research by Kamarullah et al. (2024) and Rashidin et al. (2022) found that Grammarly helped learners enhance their grammar and punctuation skills by offering instant feedback and suggestions for corrections. Similarly, Latifah et al. (2024) concluded that QuillBot supports learners in developing paraphrasing skills, which are essential for academic writing. Positive responses from participants using QuillBot were also reported by Laila & Daulay (2024)

and Rahayu et al. (2024), affirming its usefulness as a writing aid. However, Kurniati & Fithriani (2022) warned of the potential downside: learners might become overly reliant on such tools, which could hinder their long-term skill development. Additionally, Younis et al. (2023) and Ida Royani & Sihombing (2024) highlighted ChatGPT as a promising alternative to premium grammar and paraphrasing tools like Grammarly and QuillBot.

Despite the advantages, one risk associated with AI tools like QuillBot and ChatGPT is that they may reduce students' creative thinking in writing. Still, when used correctly, these tools can help generate writing ideas and support the planning process. Many instructional videos already exist showing how to use these tools, but the approach proposed in this research emphasizes ethical and academically responsible use. This study differentiates itself from previous research by focusing on the combined application of QuillBot and ChatGPT and how their integration supports writing development in a holistic manner.

The aim of this research was to explore how AI-based writing tools, specifically QuillBot and ChatGPT, can be used to improve the writing proficiency of language learners. Many students face difficulties in organizing ideas, choosing accurate vocabulary, and applying correct grammar when writing in English. With advancements in AI-assisted writing technology, tools such as QuillBot and ChatGPT offer meaningful support in addressing these challenges. This study investigates whether the integration of these tools can enhance students' writing performance in both academic and communicative contexts, thus contributing to improved writing competence among language learners.

2. LITERATURE REVIEW

Writing is an important skill for language production. However, it is considered as one of the most crucial problems for ESP students (Andelković et al., 2022; Hyland, 2022). They face many challenges in writing. Students face many problems in paraphrasing. Writing in the mother tongue is painful for many students, but when it comes to writing in the second language the students' hardship and pain are worsen (Marzuki et al., 2023; Hetilaniar et al., 2023; Al-Bahadli et al., 2023) For instance, students are difficult of using their own words or reconstructing sentences in a more effective way.

Students perceived that the time spent to practice writing in class is insufficient for them to improve on their writing. They claim that the time spent which is only one hour and half a week in learning to write is insufficient for them to be good at writing. Therefore, they need more time to practice writing outside of class to improve their writing skills.

Writing proficiency includes grammatical, intellectual, and judgemental components. Also, the students lack fundamental grammar, punctuation, capitalization, and spelling abilities. Therefore, it can be said that writing is a challenging skill to master. Students' lack writing skills like mistakes in grammar, sentence structure, tenses, and spelling indicate a lack of language skills. In addition, vocabulary is also the basis of excellent writing.

It can be said that ESP students need more improvement on English language proficiency and language use. Teachers must provide them with more exercises and appropriate techniques to develop their writing skills. In line with it, the students also need to improve their basis of writing skills, like vocabulary, grammar, sentence structure, spelling, and so on.

The usage of AI tools in education is now expanding, and this is changing the nature of the teacher's job. Teachers today

perform a variety of tasks, including those of planners, managers, participants, assessors, and resource providers, rather than just imparting knowledge in the conventional sense. AI tools give educators additional chances and difficulties to improve the effectiveness and efficiency of their instruction (Asmara & Kastuhandani, 2024; Zulfikar et al., 2023; Kit et al., 2024) Teachers will always be unique because they motivate pupils to learn by developing genuine, meaningful relationships with them. In the future of education, the integration of AI technologies and teachers will create a new paradigm for teaching and learning that will better support and guide students' overall growth.

Writing tools driven by artificial intelligence (AI) are becoming more and more common in English as a foreign language (EFL) classroom. These resources include writing assistance, grammar checkers, and computer programs that can produce written works like essays without human assistance. Students and teachers can save time and effort by using them since they are simple to use and efficient (Suhardiman et al., 2025; Royani et al., 2021; Wulandari, 2020; Gustiningsi et al., 2024; Destriana et al., 2024) Furthermore, AI writing tools have been specifically utilized for EFL students that have poor English competence. By utilizing these resources, students can get help and comments right away, which will help them improve their writing more quickly.

With the introduction of Artificial Intelligence (AI) technologies in recent years, academic writing has seen a tremendous metamorphosis. Artificial intelligence (AI)-driven programs like QuillBot and ChatGPT have become valuable resources that provide inventive ways to improve the effectiveness, precision, and general standard of academic writing in English (Nurmayanti & Suryadi, 2023; Saputra & Hendriani, 2024).

Moreover, integrating AI in academic writing has raised ethical considerations like plagiarism detection, authorship, and the

Vol 8, No 2 (2025): ESTEEM

preservation of intellectual property (Juntarciego et al., 2025; Yuliandari et al., 2025). It is imperative to address the potential issues and implications that the increasing sophistication of AI-powered technologies may bring to the field of academic writing (Losi et al., 2024; Roisah et al., 2024). As the use of AI in academic writing continues to evolve, it is crucial to understand the advantages and limitations of Quillbot and ChatGPT in supporting various writing tasks.

3. METHODS

The research was conducted in the D4 Marketing Management program at the State Polytechnic of Malang, with participants consisting of second-semester students enrolled in the English for Business course. Two primary instruments were employed in this study: a pre-test and a post-test. In the pre-test, students were assigned writing tasks related to travel topics to assess their initial writing proficiency. The post-test, administered after the use of artificial intelligence (AI) tools, such as QuillBot and ChatGPT, featured different writing topics but maintained the same level of difficulty as the pre-test.

The research was conducted in several stages:

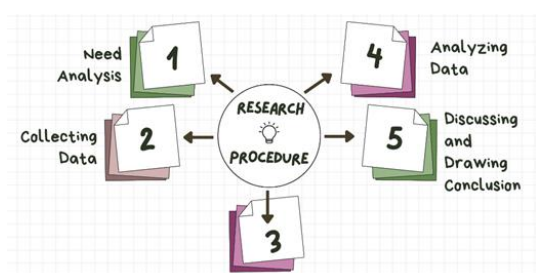


Figure 1. Research Procedure

- 1) Needs Analysis: The researcher analyzed the needs of the writing class to identify areas for improvement.
- 2) Data Collection: Data were collected through pre-tests and post-tests.
- 3) Implementation of AI Tools: Students engaged in writing activities using QuillBot and ChatGPT to enhance their writing skills.
- 4) Data Analysis: The researcher analyzed the collected data to identify patterns and evaluate the effectiveness of the intervention.
- 5) Discussion and Conclusion: Findings were compared with previous research, and conclusions were drawn based on the analysis.

Data analysis in this study was based on the results of the pre-tests and post-tests and was conducted using descriptive qualitative methods. The pre-tests and post-tests served to measure the extent of improvement in students' writing skills, focusing on their performance in structured writing tasks.

4. RESULTS AND DISCUSSION

The following is the result of the pre-test conducted before students used AI tools in their writing activities.

Table 1. The Result of Pre-Test

Students 'Identity	Relevance & Content	Organi- zation	Vocab and Word Choice	Grammar, Spelling and Punctuation	Presenta- tion
Student 1	2	2	2	2	2
Student 2	1	1	1	1	1
Student 3	2	2	2	2	2

Vol 8, No 2 (2025): ESTEEM

Student 4	3	3	3	3	2
Student 5	2	2	2	2	1
Student 6	2	2	3	1	2
Student 7	1	2	3	2	1
Student 8	2	3	2	3	2
Student 9	2	2	1	2	2
Student 10	3	3	3	3	2
Student 11	2	3	3	1	2
Student 12	3	3	2	2	3
Student 13	2	2	2	2	2
Student 14	1	3	1	3	2
Student 15	2	2	1	2	1
Student 16	3	4	2	4	2
Student 17	2	2	3	1	2
Student 18	2	2	2	1	3
Student 19	1	3	2	2	2
Student 20	3	2	1	3	2
Student 21	2	2	2	2	1
Student 22	1	2	2	2	2
Student 23	2	3	3	1	3
Student 24	2	3	3	2	2
Student 25	3	2	2	3	1
Average Score	2,04	2,4	2,12	2,08	1,88

Based on the assessment rubric for business correspondence writing, the performance of language learners was evaluated across multiple dimensions, as shown in the Pre-test Table. The average scores reflected major difficulties in the students' writing abilities, with all scores falling below 3.0. This indicated widespread challenges in mastering essential components of professional writing, calling for more focused instructional strategies.

The lowest average score was in relevance and content (2.04). This result suggested that learners had significant difficulty in ensuring their writing was both appropriate and complete in context. Many were unable to clearly identify the purpose of the correspondence or include relevant information. This highlights a gap in their ability to communicate specific business-related messages in a clear and structured way. AI tools such as ChatGPT can help language

learners practice generating relevant content, focusing on key messages, and organizing ideas in contextually appropriate ways.

The organization component, although slightly higher at 2.4, still indicated issues in structuring ideas logically. Learners struggled with paragraph coherence, transitions, and overall flow. These weaknesses impacted the readability and clarity of their writing. With the help of AI-based tools like QuillBot and ChatGPT, learners can be guided on how to arrange their writing logically, receive suggestions on transitions, and follow professional formatting standards to improve overall organization.

A score of 2.12 for vocabulary and word choice reflected learners' limited ability to select suitable terminology for formal communication. This often led to the use of vague, informal, or inaccurate terms that weakened the message. To address this, AI writing tools can provide immediate

Vol 8, No 2 (2025): ESTEEM

vocabulary enhancement suggestions, helping learners choose context-appropriate and professional language that strengthens the precision and effectiveness of their writing.

The grammar, spelling, and punctuation score (2.08) indicated persistent struggles with basic writing mechanics. Frequent errors in these areas reduced both the credibility and clarity of their writing. Tools like Grammarly, QuillBot, and ChatGPT offer real-time correction and explanations that support learners in reinforcing their grammatical foundation and refining their writing mechanics through consistent feedback.

The presentation aspect scored the lowest (1.88), revealing the most critical deficiency. Learners had difficulty maintaining a professional appearance in their documents, including issues in layout, structure, and formatting. Poor visual structure negatively impacted the communication. AI-generated templates and formatting suggestions from tools like ChatGPT can help students understand and apply standard conventions of professional correspondence, resulting in clearer and more organized outputs.

In conclusion, the analysis of the pre-test results indicated that language learners experienced challenges in all aspects of business writing. The consistently low scores emphasized the need for a comprehensive instructional approach. AI-based writing tools such as QuillBot and ChatGPT offer promising solutions by providing learners with targeted support, real-time feedback, and opportunities for continuous improvement in vocabulary use, grammar, structure, and presentation—ultimately enhancing their overall writing competence.

The following is the result of the post-test conducted after students used AI tools in their writing activities.

Table 2. The Result of Post-Test

Students Identity	Relevance & Content	Organization	Vocabulary and Word Choice	Grammar, Spelling and Punctuation	Presentation
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Student 1	3	3	4	4	3
Student 2	3	4	3	4	3
Student 3	3	3	4	4	4
Student 4	3	3	4	4	4
Student 5	3	3	4	4	3
Student 6	4	3	3	3	3
Student 7	3	3	3	3	4
Student 8	3	3	4	4	4
Student 9	4	4	4	3	4
Student 10	3	3	4	4	3
Student 11	4	3	3	4	4
Student 12	4	3	4	4	3
Student 13	4	3	4	3	4
Student 14	4	4	4	4	3
Student 15	3	4	4	4	3
Student 16	3	4	4	4	3
Student 17	4	4	3	4	3
Student 18	3	3	4	4	3
Student 19	3	4	3	3	3
Student 20	4	4	4	4	3
Student 21	4	4	4	3	4
Student 22	4	4	3	4	4
Student 23	4	4	4	4	3
Student 24	3	4	4	3	4
Student 25	4	4	3	4	3
Average Score	3,48	3,52	3,68	3,72	3,4

Based on the Post-test results derived from the assessment rubric for business correspondence writing, the performance of language learners showed significant development across various evaluated components. These improvements were closely linked to the integration of AI-based writing tools such as ChatGPT and QuillBot. All average scores surpassed 3.0, indicating a notable enhancement in the learners' writing competence.

The score for relevance and content (3.48) indicated that learners were increasingly successful in presenting clear, focused, and detailed messages in their written communication. The use of ChatGPT was instrumental in this progress, as it supported learners in generating ideas and

Vol 8, No 2 (2025): ESTEEM

organizing them around the main objectives of the correspondence. With the tool's help, students demonstrated better understanding of the communicative purpose and delivered more complete and relevant messages.

In terms of organization, the average score (3.52) revealed that learners had developed a more logical structure in their writing. This advancement was attributed to the combined use of ChatGPT and QuillBot. While ChatGPT helped sequence content effectively, QuillBot contributed to improving cohesion and textual flow. As a result, learners produced correspondence that demonstrated coherent paragraphing, clear transitions, and an overall professional structure.

The vocabulary and word choice component received a strong score (3.68), showing that learners were increasingly capable of selecting context-appropriate and precise terminology. This improvement was primarily driven by QuillBot's feedback mechanisms, which guided students in refining their language use. Through repeated interaction with the tool, learners gained exposure to formal expressions and business-appropriate word choices, enhancing the clarity and tone of their writing.

The highest improvement was seen in grammar, spelling, and punctuation, with an average score of 3.72. This significant progress was largely influenced by QuillBot's built-in grammar checker. Learners used the tool to detect and correct errors, thereby reducing grammatical mistakes and improving overall writing mechanics. These consistent revisions led to more polished, readable, and professionally accurate written output.

Although slightly lower than the other categories, the presentation score (3.4) still indicated a marked improvement in the formatting and visual appearance of learners' writing. The tools likely provided basic formatting guidance, but further instruction on advanced document presentation would benefit students even more. With additional focus on layout and visual elements, learners could strengthen the impact of their correspondence.

The analysis of the post-test scores suggested a strong positive correlation between the use of AI-based tools and the development of writing skills among language learners. The improvement across all categories demonstrated how ChatGPT and QuillBot contributed to learners' ability to write more effectively. While ChatGPT aided in content planning and organization, QuillBot significantly enhanced grammar, vocabulary, and stylistic accuracy. The continued use of these tools, in conjunction with teacher feedback and sustained practice, was recommended to further strengthen learners' writing competence in professional contexts.

Discussion

The findings of the study revealed a significant improvement in students' ability to write business correspondence after using AI-based tools such as ChatGPT and QuillBot. In the pre-test phase, the average scores of students across the five assessment components—Relevance and Content, Organization, Vocabulary and Word Choice, Grammar, Spelling and Punctuation, and Presentation—were relatively low, ranging between 1.88 and 2.40. This indicates that prior to the intervention, students lacked the skills to write proper business letters in terms of content, structure, and appropriate use of formal language. This aligns with Hyland (2019) argument that writing in academic and professional contexts requires not only linguistic accuracy but also the ability to organize arguments and present information coherently.

Following the learning process supported by ChatGPT and QuillBot, the students' average scores improved significantly, ranging from 3.4 to 3.72. The most notable increase was observed in Grammar, Spelling and Punctuation, suggesting that QuillBot's automatic correction and immediate feedback features effectively helped students revise sentence structure and grammatical accuracy. This supports the findings of Sherine et al. (2020), who emphasized that focused, repeated written feedback can enhance grammatical

Vol 8, No 2 (2025): ESTEEM

accuracy in L2 writers. Furthermore, the improvement in Vocabulary and Word Choice reflects the students' growing ability to choose contextually appropriate words, facilitated by QuillBot's paraphrasing and synonym suggestions. This is consistent with Olsson and Tvena (2023), who highlighted the importance of contextual and repeated input in vocabulary acquisition.

Increases in Relevance and Content and Organization also indicate that ChatGPT effectively supported students in generating ideas, offering structural templates, and suggesting suitable opening and closing lines. These features helped students write more coherent and logically organized business correspondence. Warschauer & Kern (2017) support this by stating that AI writing tools provide cognitive scaffolding that enhances independent thinking and writing processes. However, despite the overall improvement, the Presentation component remained the lowest among the five categories. This suggests that students still require direct teacher intervention to master formatting and visual presentation, as emphasized by Febriyanti (2022), who argue that genre-based instruction and modeling are essential in teaching formal writing.

In summary, the results show that integrating AI technology into writing instruction can positively impact students' business writing skills, particularly in English for professional purposes. Tools like ChatGPT and QuillBot serve as effective learning aids by offering immediate feedback, correcting errors, and boosting student confidence. Nevertheless, the successful implementation of such tools requires teachers' guidance to ensure proper usage and to help students understand the context, ethics, and structure of professional writing comprehensively.

5. CONCLUSION

In the English for Business Writing class, students utilized QuillBot and ChatGPT to enhance their learning experience in an interactive and practical manner. At the outset, they were introduced to the features of both tools, which were specifically applied to

improve their business correspondence writing. QuillBot helped students refine their grammar and writing style in real time, enabling them to construct more professional and contextually appropriate sentences. ChatGPT, in turn, provided suggestions for formatting emails and business documents and offered immediate, constructive feedback.

Throughout the course, students participated in various writing exercises using both tools. They were regularly assigned tasks such as writing business emails or reports, which they revised using QuillBot to enhance clarity and precision. Additionally, students were encouraged to compare and discuss their work after receiving feedback from ChatGPT, fostering peer learning and a deeper understanding of effective writing strategies. This collaborative process allowed them to identify areas for improvement and implement revisions more effectively.

The class also incorporated regular Q&A sessions, during which students could seek clarification on challenges related to business writing. ChatGPT provided detailed responses and explanations, supporting students in developing a stronger grasp of business communication principles. Overall, the combined use of QuillBot and ChatGPT significantly improved students' writing skills and boosted their confidence in producing professional business documents. These tools contributed to a more dynamic and personalized learning environment, effectively meeting the diverse needs of the students.

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Vol 8, No 2 (2025): ESTEEM

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Vol 8, No 2 (2025): ESTEEM

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