

## IMPROVING EFL STUDENTS' WRITING PERFORMANCE THROUGH CHATGPT

Yaritza Adriana Cipta, Muhlisin Rasuki<sup>2</sup> & Henri Fatkurochman<sup>3</sup>  
Universitas Muhammadiyah Jember<sup>1,2,3</sup>

DOI: 10.23917/humaniora.v26i2.11540

Received: July 3<sup>th</sup>, 2025. Revised: July 28<sup>th</sup>, 2025. Accepted: January 28<sup>th</sup>, 2025  
Available Online: August 27<sup>th</sup>, 2025. Published Regularly: August, 2025

Keywords	Abstract
ChatGPT EFL Writing Performance Grammar Mastery Vocabulary Development	<i>In the era of digital learning, enhancing students' writing abilities has become increasingly important, particularly for EFL learners who often face challenges in grammar and vocabulary. Integrating AI tools such as ChatGPT offers a potential solution to these issues by providing language support during the writing process. This study investigates how ChatGPT can effectively support EFL students in improving their writing skills in English. Employing a Classroom Action Research (CAR) method, the study was conducted in two cycles involving 33 XI-6 students at SMAN 1 Kalisat. Data were collected through pre-tests, post-tests, and classroom observations, and analyzed quantitatively and qualitatively. Findings revealed a substantial increase in students' average writing scores from 44.26 in the preliminary test to 80.51 in the post-test of Cycle 2, indicating notable improvement in grammatical accuracy and vocabulary usage. These results were achieved through changes in prompt design, where the instructions were simplified and the feedback given ChatGPT was translated in Bahasa Indonesia, to make students more straightforward to understand the explanation. The study concludes that when implemented with guided support, AI tools can effectively facilitate the development of essential language skills.</i>
Corresponding Author	
Yaritza Adriana Cipta Universitas Muhammadiyah Jember	
<b>Email:</b> yaritzaadriana86@gmail.com	
<b>Phone:</b> 085336262000	

## INTRODUCTION

Writing is a fundamental skill in language learning, allowing learners to convey ideas, concepts, or feelings with their imagination and creativity to express them in words (Selvaraj & Aziz, 2019). Writing skills is defined as a person's ability to express thoughts, ideas, and concepts through various good and correct written languages (Mariana et al., 2018). Besides that, according to (Olimovna, 2023) writing allows us to communicate and give information not only with our contemporaries. The writer needs skills to produce good writing, such as vocabulary, grammar, language use, organization, spelling, mechanics, etc. (Wau, 2022). In line with these essential skills, effective writing performance also hinges on specific linguistic components that shape coherent and meaningful texts. The primary components of learning to write in a foreign language are linguistic knowledge, vocabulary choices, syntactic patterns, and cohesive devices that comprise the essential blocks of text (Hyland, 2019). Based on the research by (Murti et al., 2024) EFL (English as a Foreign Language) grammar is a type of grammar owned by

someone who is not a native speaker to understand the grammar of a language in a way that teaches it consciously. Addressing the effective writing performance requires innovative teaching support that aligned with the use and development of digital technology in education. Among various innovations, AI is one of the transformative tools, offering personalized learning experience, immediate feedback, and language supports. Artificial Intelligence (AI) was designed to facilitate human work and activities (Fitria, 2021). One of the familiar AI, ChatGPT as one of the AI-based language model developed by OpenAI that processes Natural Language Processing (NLP) to give clear, well-structured, and fairly accurate answers to user questions in a prompt (Setiawan & Luthfiyani, 2023). ChatGPT are able to generate responses in multiple languages and in different styles, such as formal, informal and humorous (Deng & Lin, 2023). This digital technology may help students by generate feedback, suggesting vocabulary and assisting students to write based on the correct grammatical order that makes ChatGPT has a potential as a digital assistant for EFL students to write.

ChatGPT offers numerous benefits that can significantly enhance the language learning process. ChatGPT serves as a versatile tool that enhances both teaching and learning experiences. It has a vast vocabulary and the ability to generate human-like text on diverse subjects, which is a potent tool for language learning and instruction (Baskara & Mukarto, 2023). It enhances language learning by providing authentic interactions, contextual meaning, addressing mistakes, creating diverse texts, paraphrasing and translating, and developing assessment and quizzes (Nugroho et al., 2023). ChatGPT also able to understand and generate appropriate responses in natural human language based on the prompt that users gave. The prompt is to guide ChatGPT to work based on the user's needs. Prompt became one of the crucial terms in using ChatGPT. The use of the prompt helps the users to lead ChatGPT on providing the content that will be given by ChatGPT which it was produce from AI. Using a proper prompt, the digital result content by ChatGPT will be relevant and accurate based on the users' needs.

Several studies have supported the use of AI tools in helping students write English. The study of (Fitria, 2021) figured out ChatGPT can produce essays with a good structure, considering the use of tenses active voice and passive. The study was descriptive qualitative and limited to evaluating ChatGPT general ability to write an essay. In contrast, other studies have explored how students perceive its use in learning contexts. (Salwa & Tyas, 2024) examined students' perception of using ChatGPT to complete English writing tasks. They reported that students felt more motivated and found the tool helpful in improving their writing performance due to its accessible features and insightful feedback. However, there is still limited research on how ChatGPT can be practically integrated into classroom instruction to support students in revising and improving their own writing, especially among secondary-level EFL learners. This is particularly important because writing remains a major challenge for EFL students, who often struggle with grammar and vocabulary due to limited exposure and practice in using English. Suryati (2013, as cited in (Adam et al., 2021) observed that in EFL context, learners typically have limited exposure to English, and the classroom is often the only place where they can actively engage with the language.

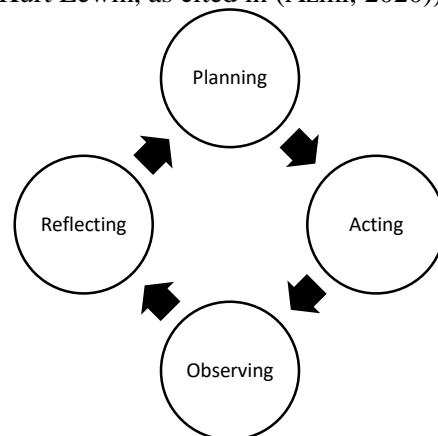
This case is also found in senior high school students, especially at SMAN 1 Kalisat. It was determined as the main problem based on the pre-test in the preliminary study. The pre-test uses narrative essay writing that found the students often experience difficulties such as choosing suitable vocabularies and grammar structured past events or experiences. To validate the problem, the pre-test results showed an average score is 44.26, indicating a low level of students' writing performance due to the limitations of vocabulary and grammar. This study proposes a solution to integrate ChatGPT into the writing process to address students' writing challenges. This process involves guiding students through writing a narrative essay text with ChatGPT to support the revision. The difference

between this study and the previous study is that this study uses a pre-test and post-test design to measure the real impact of ChatGPT on students' writing ability, particularly in grammar and vocabulary, addressing the actual writing challenges faced by learners at SMAN 1 Kalisat.

Based on the information above, this research aims to answer the question: "The Use of ChatGPT to Improve EFL Students' English Writing Performance" by providing helpful feedback on grammar, vocabulary, coherence, and content. ChatGPT can identify grammatical errors, suggesting vocabulary improvements, restructuring unclear sentences, and enhancing overall coherence. By addressing these aspects, ChatGPT helps students produce more accurate and clearer writing.

## **METHOD**

This study used a collaborative Classroom Action Research (CAR) by collaborating with the English teacher. Classroom action research aims to improve the quality of learning through conducting research during class time (Salim et al., 2022). The research was conducted at class XI-6 at SMAN 1 Kalisat consisting of 33 students by focusing on the improvement of students' writing performance, especially in grammar and vocabulary use through the implementation of ChatGPT as an AI-assisted writing tool. The study followed two cycles, each cycle consisting of a 2 × 40 minutes (2 JP) session. Each cycle consisted of four stages (Kurt Lewin, as cited in (Azmi, 2020)).



The first stage, planning, was carried out through collaboration between the researcher and the teacher to design learning activities, including teaching materials, a lesson plan containing instructions given to the students, and evaluation instruments that implement ChatGPT into the learning process. The second stage, acting, involved executing the plans made in the planning stage, such as delivering the material and administering the pre-tests to the students. At this stage, students were also given directions on using ChatGPT using proper guidance prompts to help them identify the vocabulary and grammar used for the post-test. During the post-test, students' smartphones were collected to ensure that their writing reflected their understanding and learning, rather than real-time assistance from ChatGPT. The third stage, observation, focused on collecting data about students' learning behaviors and performance through an observation sheet and writing tests. Lastly, in the reflecting stage, the researcher evaluated the results of the cycle to determine whether the next cycle needed to be carried out.

In this study, data sources were obtained from students through the results from the writing performance by pre-test and on the post-test to measure students' writing performance before and after using ChatGPT, documentation of students' narrative essays, and the observation during the learning process in the acting stage, to observe students' activities, such as classroom setting, learning process, and learning output. The collected

data were analyzed quantitatively by calculating the mean scores of students' writing performance in each cycle. The comparison of pre-test and post-test scores was used to determine the effectiveness of ChatGPT in improving students' writing performance, especially in grammar and vocabulary use in a narrative essay. The observational data were analyzed descriptively to identify students' engagement, participation, and behavior in the writing activities. The researcher also examines students' narrative essays qualitatively to identify improvements in structure, coherence, and use of language.

This study defines several operational definitions that provide clarity and understanding of the research focus. ChatGPT refers to an artificial intelligence (AI) developed by OpenAI, and it is a common and popular AI used by students for academic purposes. In this research, ChatGPT is used to assist students in writing a narrative essay in English by providing suggestions related to grammar and vocabulary. Writing performance refers to a person's ability to write in English. It includes how clear their ideas are, how they organize their writing, choice of words, grammar, spelling, and punctuation. In this study, writing performance is measured through the students' progress in producing narrative essays before and after using ChatGPT.

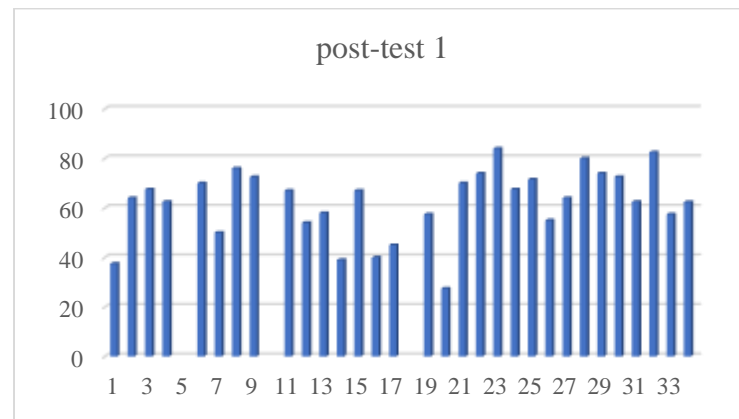
The success criteria in this Classroom Action Research were based on the students' average post-test scores. The action was considered successful if the average score reached 80. This aligns with the scoring rubric from Jacobs et al (1981, as cited in Manullang, 2021), where a score between 70 and 84 is categorized as 'good to average', indicating effective sentence construction despite minor grammatical errors. Additionally, the minimum passing grade set by the school is 78, which serves as a practical benchmark. If the criterion was not achieved in the first cycle, further actions would be implemented in the next cycle.

## **RESULT**

This research reveals a progressive increase in their performance of writing a narrative essay, that demonstrated a significant improvement in students' performance because it reached the success criteria, which required students' average score above 80 in writing performance, which were met in cycle 2 of 80.51. A detailed presentation of these results is provided in the following sections:

### ***1. Cycle 1***

The first cycle of this Classroom Action Research was conducted on May 8, 2025, at SMAN 1 Kalisat. The implementation involved 33 students from class XI-6, though only 30 were present during the lesson. The cycle followed four main stages: planning, acting, observing, and reflecting. In the acting stage, students were instructed on narrative essay structure and introduced to ChatGPT. They were guided to analyze their pre-test writing through ChatGPT to identify grammatical and vocabulary errors, and then in observing, compose a new narrative essay based on a specific theme as a post-test. The results showed an improvement in students' writing performance, with the average score increasing from 44.26 in the pre-test to 62.33 in the post-test an increase of approximately 40.84%. The result of the writing test will be provided below:



**Figure 1. Students' writing test cycle 1**

In addition to the writing test, observation was conducted to gain insight into students' engagement and classroom dynamics during the learning process. Based on the observation sheet, the classroom setting was not ideal. The seating arrangement was disorganized, and many students were still fatigued due to a prior physical education class. Only 30 out of 33 students attended and did not prepare for the English lesson. This resulted in low concentration, poor participation, and limited ability to focus on the researcher's explanation of using ChatGPT. Furthermore, many students appeared confused during the ChatGPT session, as they struggled to understand the English prompts and instructions provided. These findings suggest that the learning environment and prompt clarity significantly influenced students' ability to engage effectively with the activity.

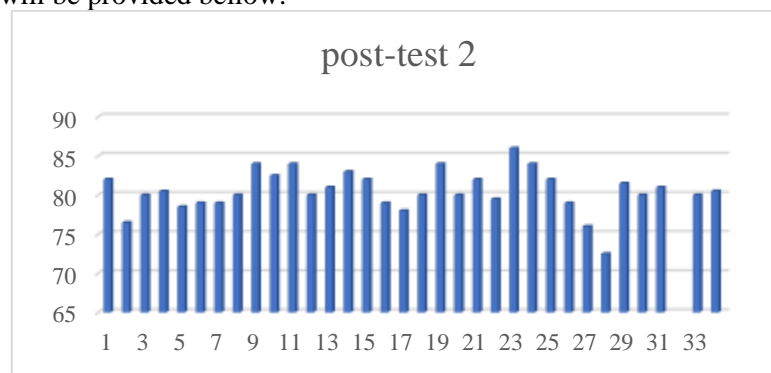
Despite the result, the outcome did not meet the success criteria, which required an average score of 80. Several factors contributed to this shortfall based on the observation. First, the prompts used in ChatGPT were too long and presented in English, which made it difficult for students to understand and fully apply the feedback. Besides the prompt, the pre-test and post-test used different themes, which disrupted students' vocabulary recall and application. Moreover, the classroom setting was not conducive to focused learning. Students were tired from a previous exercise session, and the seating arrangement was not neat, further hindering concentration. Due to this issue, the students cannot pay full attention to the researcher's explanation of using ChatGPT and learn from their mistakes from the previous writing results.

Nevertheless, the improvement in average scores suggests that ChatGPT has potential as a writing aid, particularly for grammar and vocabulary development. However, cycle 1 also underlines the need for careful planning, including simpler and clearer prompts, consistent writing topics, and a more supportive classroom environment to ensure the effective use of AI tools in language learning. These reflections informed necessary revisions for the subsequent cycle to better address the identified issues.

Moreover, a qualitative analysis of the students' narrative essays in cycle 1 revealed common issues such as poor sentence structure, incorrect tense usage, and misuse of academic vocabulary. For example, in one essay about Cut Nyak Dhien, a student wrote, "Despite her eventual regal exile, her unwavering spirit inspired the Acehnese resistance against Dutch rule," which showed confusion in word order, article use, and sentence coherence. Many students relied heavily on copied phrases or memorized structures without fully understanding their meaning, which led to awkward phrasing. These issues suggest that while students attempted to use complex vocabulary, they lacked control over grammar and meaning-making in their texts.

## **2. Cycle 2**

The second cycle, conducted on May 14, 2025, involved 32 students of class XI-6 at SMAN 1 Kalisat that implemented to address the challenges encountered in cycle 1 and to optimize the use of ChatGPT in improving students' writing performance. Several improvements in this cycle were made based on the reflections from cycle 1. On acting stage, the researcher simplifies the prompt with ChatGPT, e.g. "please check the grammatical and vocabulary errors in this essay, also give a simple but understandable explanation in Indonesian" and using the same theme for both the initial and final writing tasks. The classroom conditions were also improved; students this had not participated in physical activities beforehand, seating was arranged to allow individual focus, and the room temperature was more conducive to learning. Observation results supported this change: all students had their own seats, were more physically prepared, and displayed greater readiness to engage in the class. During the lesson, students wrote a narrative essay about a family member, submitted it to ChatGPT using provided prompt, studied the AI-generated corrections, and rewrote their essays based on the feedback. The result of the writing test will be provided below:



**Figure 2. Students' writing test cycle 2**

These results indicate a significant improvement, with the average writing score rising from 62.33 in cycle 1 to 80.51 in cycle 2, thus meeting the criteria of success. The more accessible prompt and the use of the same theme helped students better understand and apply corrections, particularly related to grammar and vocabulary. The successful outcomes of Cycle 2 demonstrate that with the proper instruction that aligns with level of student writing performance, guided AI interaction, and a supportive classroom environment, ChatGPT can serve as an effective tool to improve EFL students' narrative writing performance, particularly in fostering self-correction and awareness of language use.

Based on the observation sheet, students showed higher engagement and motivation levels than in cycle 1. They could input their texts correctly, understand ChatGPT's grammar and vocabulary feedback, and apply the corrections in their revised texts. Students paid close attention to the researcher's explanation and participated in discussion sessions. They began choosing more suitable words and using proper grammar in their output. Many students could also explain why they revised specific parts of their writing, reflecting deeper understanding and language awareness. Most students actively followed the instructions, used ChatGPT properly, and paid more attention during the learning process. Improving classroom atmosphere and instructional clarity contributed to more focused participation and better learning outcomes.

In addition, qualitative analysis of the students' revised essays in cycle 2 demonstrated notable improvements in clarity, accuracy, and personal expression. For instance, a student initially wrote, "She work so hard just for my future. Sometimes she feel tired but she keeps going," which contains subject-verb agreement errors and lacks detail. After receiving feedback from ChatGPT, the student revised it to, "She works very hard for my

future. Even when she feels tired, she never gives up because she is strong." This shows development in grammar, sentence variety, and emotional expression. Most students were able to convey their ideas more clearly and personally, using improved sentence structure and more appropriate vocabulary, indicating a better understanding of how to express their thoughts in English.

## **DISCUSSION**

The improvement in students' average writing score from 44.26 in the preliminary stage to 62.33 in the post-test of cycle 1 indicates a positive impact of the integration of ChatGPT into the writing process. This score did not meet the success criteria yet, as many students face challenges in grammar and vocabulary usage, this progress is aligned with the theory from (Hyland, 2019) where the primary components of learning to write a foreign language are linguistic knowledge and vocabulary choices. These components are essential to produce an effective and coherent writing, but this will be the challenge for EFL students in this research because they rarely use English in their daily lives.

In cycle 2, students' writing performance improved significantly and met the success criteria. Most of the students were able to produce a well-structured narrative essay text using proper grammar and choice of words relevant to the given topic. This result was aligned with the theory of (Wau, 2022) where the skills that the writer needs to produce a good writing should master in vocabulary, grammar, language use, and spelling. Two key improvements contributed to this success: the consistent theme for the students to write in the pre-test and post-test and the prompt used in this cycle. The prompt in this cycle was simplified and designed to generate feedback in Bahasa Indonesia, which helped students better understand ChatGPT's corrections and explanations. This explanation was aligned with the theory from (Dermawan & Herdianto, 2024), which in using a proper prompt, the digital result content by ChatGPT will be relevant and accurate based on the needs of the users (Dermawan & Herdianto, 2024). The revision of the prompt to make it more simplified, along with the use of Indonesian in the explanation was also aligns with (Nugroho et al., 2023), who stated that ChatGPT enhances language learning by providing authentic interactions, contextual meaning, addressing mistakes, creating diverse texts, paraphrasing, and translating, and developing assessment and quizzes. The successful outcomes of Cycle 2 demonstrate that with the right instructional that aligns with the level of student writing performance, guided AI interaction, and a supportive classroom environment, ChatGPT can serve as an effective tool to improve EFL students' narrative writing performance, particularly in fostering self-correction and awareness of language use.

## **CONCLUSION**

This research investigated the use of ChatGPT as an AI-assisted learning tool to improve EFL students' writing performance, specifically in grammar and vocabulary. The findings show a significant increase in students' writing scores from the pre-test and post-test in both cycles, with the final average scores reaching 80.51. The problems that students faced in their writing were addressed using ChatGPT with proper prompt guidance. Thus the students could learn and improve their writing performance significantly. Using prompts that requested explanations of the corrections and suggested words delivered in Indonesian enabled students to comprehend the feedback better and apply it effectively in their writing. These improvements allows students to write narrative essays focused only on one theme, which was about one of their family members who inspired them. Through this process, students could learn and implement grammar and vocabulary errors in their writings. This research highlights using ChatGPT as a medium to improve students' writing performance by correcting their grammar and vocabulary. Based on the findings, it is suggested that English teachers integrate AI tools or other tools

that can be used as media for students to learn and practice writing using proper grammar and suitable vocabulary. To optimize its use, teachers should provide clear instructions and well-designed prompts. Future researchers are encouraged to explore the use of ChatGPT in other writing genres or other educational levels to broaden its applicability in EFL contexts.

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