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The Improving Descriptive Writing by Using Chat-GPT in University

Luluk Lailatun Najah[1], Imam Ghozali[2]
[1,2]Universitas Islam Jember, Indonesia

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ABSTRACT (10 PT)

This study investigates the use of Chat-GPT to enhance descriptive writing skills in higher education. The research involved students utilizing Chat-GPT to support their writing process, leading to a significant improvement in their work. The mean score for descriptive writing increased from 64 to 85.5, marking a 33.6% enhancement. The analysis revealed that Chat-GPT effectively improved sensory detail, clarity, and cohesion while boosting students' enthusiasm for writing. Successful implementation relied on careful integration with structured guidance. While individual responses varied, using Chat-GPT as a complement to traditional methods yielded the best outcomes. The findings indicate that when implemented properly, Chat-GPT can serve as an effective tool for developing students' descriptive writing skills. However, its success is contingent upon thoughtful integration and adjustment to individual needs. This research paves the way for further exploration into the role of AI in education, particularly in cultivating academic writing skills.

Corresponding Author:

Luluk Lailatun Najah
Universitas Islam Jember, Indonesia
Email: luluklailatunnajah@gmail.com

INTRODUCTION

Descriptive writing is an essential skill required for effective communication, especially when it involves describing objects—both living and non-living—through vivid and engaging language. Descriptive writing involves three main components: a communicative purpose to describe an object, a rhetorical structure that includes identification and description, and the use of correct grammatical patterns, such as declarative sentences and the present tense (Pardiyono, 2007). However, many students struggle with descriptive writing due to a lack of sensory detail, clarity, and cohesion. To address these challenges, artificial intelligence (AI) has emerged as a powerful tool in education. Artificial intelligence (AI) has become one of the fastest-growing technologies, with a wide range of applications, including in education (Fitria, 2023). Research in the field of AI in computer science focuses on solving cognitive problems commonly associated with human intelligence, such as learning and pattern recognition (Fitria, 2021). One of the latest advances in AI technology is the development of the Generative Pre-trained Transformer (GPT) model by OpenAI. This model can generate text that resembles human writing using a sophisticated transformer architecture. AI technology, specifically the Generative Pre-trained Transformer (GPT) model developed by OpenAI, has the potential to revolutionize writing instruction. This model can generate text that resembles human writing, providing students with instant feedback and contextually relevant examples. According to (Brent., 2023) Chat-GPT is an AI tool that can generate text and computer code in almost any format and can

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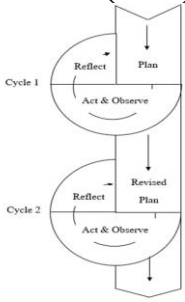
respond to almost any type of question. Chat-GPT, an AI-powered tool built on this model, assists students by offering suggestions and helping them improve their writing (Cheng et al., 2023). By integrating AI into the writing process, students can improve their descriptive writing skills, fostering greater creativity and critical thinking as they experiment with different styles and ideas.

Using Chat-GPT as a tool for writing descriptive texts can be especially beneficial for students who struggle with integrating sensory details, clarity, and cohesion. First, it is important to understand basic concepts, such as utilizing the five sensory elements to create a vivid experience. Students can ask for examples of descriptive texts, such as a park in the morning, to explore what details to include. Additionally, asking about how to enrich the description of sounds or colors can improve the overall appeal of their writing. After writing, seeking suggestions for sentence improvement can lead to greater clarity and cohesion. By creating a structured outline and engaging in regular writing exercises, students can receive constructive feedback. This iterative revision process is essential to refining their work. Furthermore, exploring variations in style and tone can add depth to their descriptions, making their writing more engaging to readers.

In the context of teaching English as a Foreign Language (EFL), the use of AI-based tools such as Chat-GPT has increased significantly, as they can help students with instant feedback and high accessibility (Chang et al., 2021; Gayed et al., 2022). Chat-GPT also allows for more flexible instruction, such as virtual learning and assessment that is more responsive to students' needs (Rahman & Watanobe, 2023). However, despite the potential of these tools, challenges in descriptive writing skills remain a problem for many students. Previous studies have shown that the integration of AI in education can improve students' writing skills (Pandia & Sibarani, 2023). Chat-GPT has also been verified to assist with tasks such as descriptive writing, improving papers, and conducting literature reviews (Topsakal & Topsakal, 2022). However, most studies have not specifically explored the impact of using Chat-GPT on descriptive writing skills. Therefore, this study aims to fill this gap by investigating how Chat-GPT can help students improve their descriptive writing skills. This study focuses on students in the English Language Education program, who are expected to have basic writing experience but still face challenges in this area. Thus, the purpose of this study is to evaluate the extent to which the use of Chat-GPT can contribute to improving students' descriptive writing skills, provide new insights into technology-based teaching, and support the development of students' academic skills.

METHODS

This study used a qualitative method with a Classroom Action Research (CAR) approach. This method aims to produce descriptive data on student behavior by using Chat-GPT for descriptive writing. The study was conducted in class by teachers and researchers to address specific problems in the learning context (Kemmis & McTaggart, 1988; Fraenkel et al., 1990). The research design used Class Action Research (CAR) 2 cycle as follows:



Picture 1. Action Research Process Model

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The study population consisted of English Education students, with a sample of 10 students selected based on basic writing skills, ability to use technology, and willingness to participate. Although students have writing skills, they face obstacles in terms of sensory detail, clarity, and cohesion.

Data collection was carried out through several methods, including observation of student interactions with Chat-GPT, field notes during lessons, and pre-tests and post-tests to measure improvements in descriptive writing skills. The pre-test was conducted before using Chat-GPT to determine students' initial abilities, while the post-test was conducted after the interaction to evaluate progress.

Table 1. Jacobs et al's (1981) Analytic Scoring Profile

Components	Score	Description
Content (O)	4	The topic is complete and clear and the details are relating to the topic.
	3	The topic is complete and clear but the details are almost related to the topic.
	2	The topic is complete and clear but the details do not relate to the topic
	1	The topic is not clear and the details are not related to the topic.
Organization (O)	4	Identification is complete and descriptions are arranged with proper connectives.
	3	Identification is almost is complete and descriptions are arranged with almost proper connectives.
	2	Identification is not complete and descriptions are arranged with few misuse of connectives.
	1	Identification is not complete and descriptions are arranged with misuse of connectives
Grammar (G)	4	Very few grammatical is not complete or agreement inaccuracies
	3	Few grammatical or agreement inaccuracies but not 2 x effect on meaning
	2	Numerous grammatical or agreement inaccuracies.
	1	Frequent grammatical or agreement inaccuracies.
Vocabulary (V)	4	Effective choice of words and word forms.
	3	Few misuse of vocabularies, word forms, but not change the meaning.
	2	Limited range confusing words and word forms.
	1	Very poor knowledge of words, word forms, and not understandable.
Mechanics (M)	4	It uses correct spelling, punctuation, and capitalization
	3	It has occasional errors of spelling, punctuation, and capitalization.
	2	It has frequent errors of spelling, punctuation, and capitalization.
	1	It is dominated by errors of spelling, punctuation, and capitalization.

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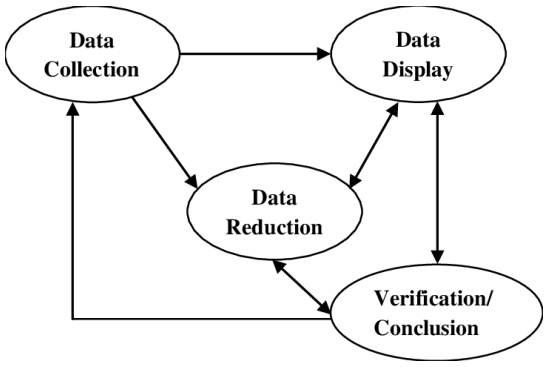
Data analysis followed the Miles & Huberman (1992) model, which includes data collection, reduction, and interpretation. The stages of data analysis are described as follows:



Picture 2. Miles dan Huberman (1992)

To calculate the mean of students' descriptive writing scores, the following formula is used (Sudijono, 2010):

$$Mx = \frac{\sum X}{N}$$

Notes:
- *Mx* : Mean
- *X* : Individual score
- *N* : Number of students

In analyzing students' writing scores from the pre-test to the post-test in Cycle 1 and Cycle 2, the researcher employs the following formulas to calculate the percentage of students' improvement:

1. For Post-test 1:

$$P = \frac{y - y1}{y} \times 100\%$$

Notes:
- *P* : Percentage of Students' Improvement
- *y* : Pre-test Result
- *y1* : Post-test 1 Result

2. For Post-test 2:

$$P = \frac{y2 - y}{y} \times 100\%$$

Notes:
- *P* : Percentage of Students' Improvement
- *y* : Pre-test Result
- *y2* : Post-test 2 Result

Data collection was conducted through field notes, describing the results obtained from these notes.

FINDING AND DISCUSSION

Based on the results of the initial evaluation before the action, it was known that the average student score was 64.

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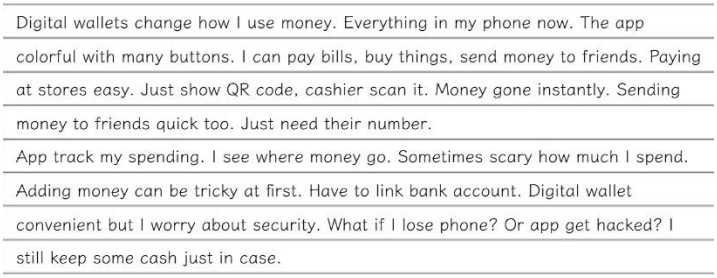
Table 2. Pre-test score

Component	Score
Mean	64

Source: Thesis Data

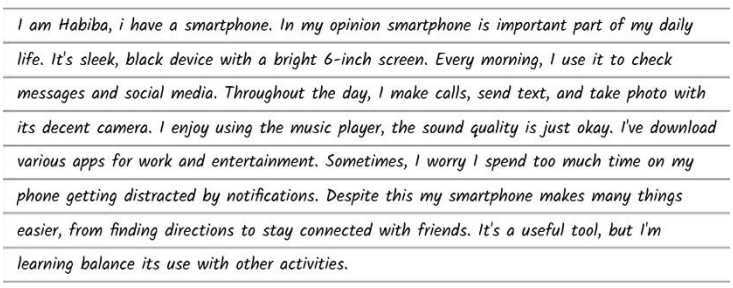
There are still many students who are not able to use Chat-GPT well, and are still weak in terms of sensory details, clarity, and cohesion. It is proven that some of their writing feels flat and lacks imagination. In the pre-test results of this study, the researcher presented two of the ten student writings analyzed by the researcher in accordance with

the research objectives. This can be seen from the results of the initial pre-test where students' writing has an average score of 64. The following data has been analyzed by researchers which describes the results of the analysis of students' writing.


Digital wallets change how I use money. Everything in my phone now. The app colorful with many buttons. I can pay bills, buy things, send money to friends. Paying at stores easy. Just show QR code, cashier scan it. Money gone instantly. Sending money to friends quick too. Just need their number.

App track my spending. I see where money go. Sometimes scary how much I spend. Adding money can be tricky at first. Have to link bank account. Digital wallet convenient but I worry about security. What if I lose phone? Or app get hacked? I still keep some cash just in case.

Picture 3. Descriptive writing


I am Habiba, i have a smartphone. In my opinion smartphone is important part of my daily life. It's sleek, black device with a bright 6-inch screen. Every morning, I use it to check messages and social media. Throughout the day, I make calls, send text, and take photo with its decent camera. I enjoy using the music player, the sound quality is just okay. I've download various apps for work and entertainment. Sometimes, I worry I spend too much time on my phone getting distracted by notifications. Despite this my smartphone makes many things easier, from finding directions to stay connected with friends. It's a useful tool, but I'm learning balance its use with other activities.

Picture 4. Descriptive writing

Overall, the results of the analysis show that the pre-test data of the first student's writing successfully composed a descriptive text that met all structural elements, while the second student's writing still needs to be improved in creating sensory details, clarity, and cohesion. This is only shown in 2 data because it already represents part of what already exists, and some data are almost the same as existing data. The researcher also observed the use of varied language in the students' writing, including participants who describe the role of the writer, adjectives that enrich the description, and the use of conjunctions to connect ideas. This shows that although there are differences in achievement, further research is needed, so the researcher conducted this study.

Table 3. Post-test 1 score

Component	Score
Mean	68,5

Source: Thesis Data

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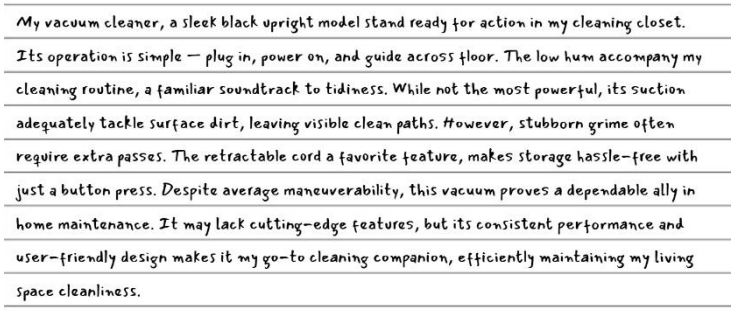
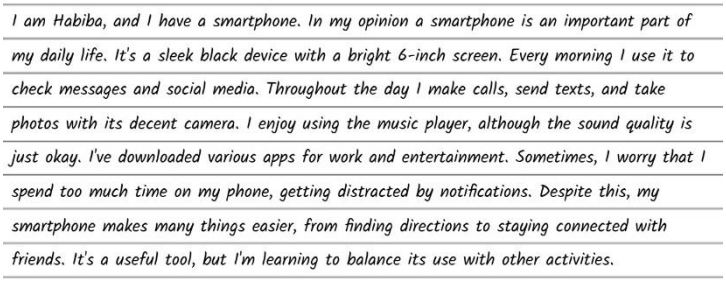
If the initial pre-test score showed 64, the score should have increased by 30% after being explained what the descriptive material was like and how to use Chat-GPT as a writing aid in the post-test, but this post-test only increased by 7.1% which means it has not met the desired target, namely the study is said to be successful if 50% of students can improve their abilities by 30% from the initial score. Students have been able to improve clarity and cohesion, but sensory details are still lacking, and they do not understand the use of

Chat-GPT as a writing aid. In the results of post-test 1 of this study, the researcher presented two of the ten student writings analyzed by the researcher according to the research objectives. We can see this in some student writings that still feel boring and less interesting. The following is data that has been analyzed by the researcher which presents the results of the analysis of student writing.


My vacuum cleaner, a sleek black upright model stand ready for action in my cleaning closet. Its operation is simple — plug in, power on, and guide across floor. The low hum accompany my cleaning routine, a familiar soundtrack to tidiness. While not the most powerful, its suction adequately tackle surface dirt, leaving visible clean paths. However, stubborn grime often require extra passes. The retractable cord a favorite feature, makes storage hassle-free with just a button press. Despite average maneuverability, this vacuum proves a dependable ally in home maintenance. It may lack cutting-edge features, but its consistent performance and user-friendly design makes it my go-to cleaning companion, efficiently maintaining my living space cleanliness.

Picture 5. Descriptive writing


I am Habiba, and I have a smartphone. In my opinion a smartphone is an important part of my daily life. It's a sleek black device with a bright 6-inch screen. Every morning I use it to check messages and social media. Throughout the day I make calls, send texts, and take photos with its decent camera. I enjoy using the music player, although the sound quality is just okay. I've downloaded various apps for work and entertainment. Sometimes, I worry that I spend too much time on my phone, getting distracted by notifications. Despite this, my smartphone makes many things easier, from finding directions to staying connected with friends. It's a useful tool, but I'm learning to balance its use with other activities.

Picture 6. Descriptive writing

After completing the first learning cycle, several important reflections emerged. Although students showed enthusiasm for the use of Chat-GPT, their understanding of correct descriptive writing and optimization of Chat-GPT functions was still inadequate. The improvement in writing quality was not as significant as expected, with an average increase of only around 7.1%, far below the target of 30%. The improvement was mainly seen in clarity and cohesion, while sensory details were still weak. Based on these reflections, several improvements need to be made for cycle 2. Among them are providing concrete examples of descriptive paragraphs, and developing written guidelines and steps for using Chat-GPT. The learning approach also needs to be changed, considering that oral explanations are less effective. With these improvements, it is hoped that the second cycle will show a more significant improvement in the quality of students' descriptive writing and the effective use of Chat-GPT as a writing aid.

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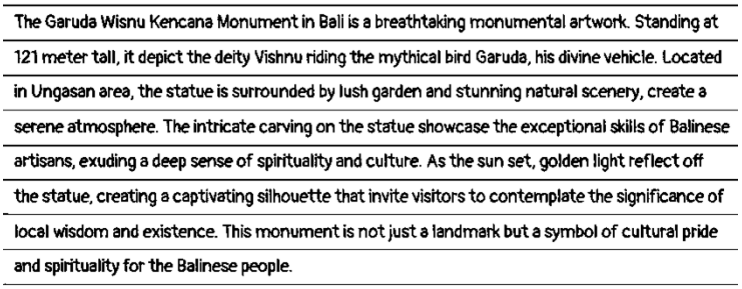
Table 4. Post-test 2 score

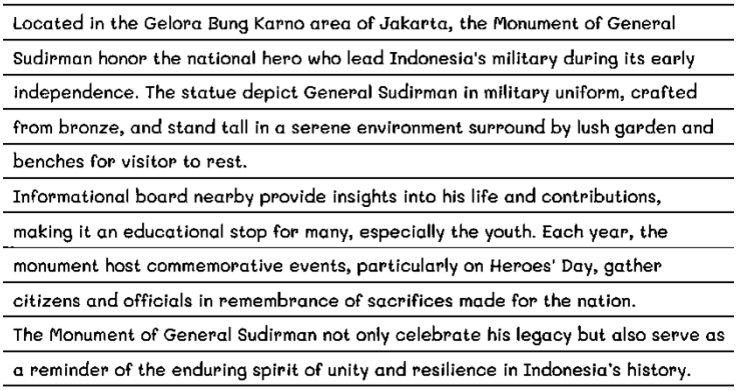
Component	Score
Mean	85,5

Source: Thesis Data

Based on the results of the observations that have been carried out, it can be concluded that students can use Chat-GPT as a writing aid, students also understand how to write descriptively. If the increase in the previous post-test score was 7.1%, then the increase in cycle 2 was 33.6%, where this figure has exceeded the established success criteria (30%). Students can understand sensory details clearly in writing. This can be seen from the results of the post-test where many descriptive writing already have an interesting and not boring storyline. In the post-test 2 results of this study, the researcher presented two of the ten student writings analyzed by the researcher in accordance with the research objectives. The following data has been analyzed by researchers which describes the results of the analysis of students' writing.


The Garuda Wisnu Kencana Monument in Bali is a breathtaking monumental artwork. Standing at 121 meter tall, it depict the deity Vishnu riding the mythical bird Garuda, his divine vehicle. Located in Ungasan area, the statue is surrounded by lush garden and stunning natural scenery, create a serene atmosphere. The intricate carving on the statue showcase the exceptional skills of Balinese artisans, exuding a deep sense of spirituality and culture. As the sun set, golden light reflect off the statue, creating a captivating silhouette that invite visitors to contemplate the significance of local wisdom and existence. This monument is not just a landmark but a symbol of cultural pride and spirituality for the Balinese people.

Picture 7. Descriptive writing


Located in the Gelora Bung Karno area of Jakarta, the Monument of General Sudirman honor the national hero who lead Indonesia's military during its early independence. The statue depict General Sudirman in military uniform, crafted from bronze, and stand tall in a serene environment surround by lush garden and benches for visitor to rest.

Informational board nearby provide insights into his life and contributions, making it an educational stop for many, especially the youth. Each year, the monument host commemorative events, particularly on Heroes' Day, gather citizens and officials in remembrance of sacrifices made for the nation.

The Monument of General Sudirman not only celebrate his legacy but also serve as a reminder of the enduring spirit of unity and resilience in Indonesia's history.

Picture 8. Descriptive writing

From the analysis conducted, it was found that eight students' writings successfully met the expected criteria in descriptive writing. These results indicate that students have understood and applied important elements in descriptive texts, namely rich sensory details, clarity in conveying ideas, and cohesion between parts. The researcher presents two examples of student writing that reflect this achievement.

In the first writing in picture 7 post-test 2, the student was able to present an in-depth description using clear and structured language. He managed to identify the object being described and provide clear sensory details, so that readers can feel the experience being described. Each part of the writing supports each other, creating good cohesion in the overall text.

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In contrast, the second writing in picture 8 post-test 2 shows an incomplete approach. This student relies on descriptions without clearly identifying the object. Although there are quite good details, this writing lacks the clarity and structure needed in descriptive texts, so readers may have difficulty understanding the context. The researcher noted several grammatical errors, but this does not reduce the importance of developing sensory details in writing.

Overall, the results of the analysis show that the first student succeeded in composing a descriptive text that meets all structural elements, while the second student still needs to improve his ability to create clarity and cohesion. The researchers also observed varied language use in the students' writing, including participants describing the role of the writer, adjectives enriching the description, and using conjunctions to connect ideas. This suggests that despite differences in achievement, the students have shown significant progress in their descriptive writing skills.

After the completion of cycle II research, several important reflections emerged. Although students showed enthusiasm for the use of Chat-GPT, their understanding of descriptive writing and optimization of Chat-GPT functions was adequate. The improvement in writing quality experienced a significant increase as expected, with an average increase of 33.6%, exceeding the target of 30%. This increase was especially seen in clarity and cohesion, as well as sensory details. This means that students have successfully used Chat-GPT as a tool to improve the quality of their writing. Based on these reflections, the researcher and teacher decided that the research was completed in cycle 2 because it had achieved the desired target.

The findings from this research provide a comprehensive overview of the effectiveness of Chat-GPT in enhancing students' descriptive writing skills through two cycles of intervention. In the first learning cycle, while students exhibited notable enthusiasm for utilizing Chat-GPT, their understanding of correct descriptive writing practices and the optimal use of the tool remained insufficient. The overall improvement in writing quality was modest, with an average increase of only 7.1%, falling short of the targeted 30%. This limited improvement primarily manifested in clarity and cohesion, while students struggled to incorporate adequate sensory details into their writing.

In stark contrast, the second learning cycle yielded significant advancements in students' writing abilities. The average increase in writing scores reached 33.6%, comfortably exceeding the initial target. This improvement was particularly pronounced in the areas of clarity, cohesion, and sensory detail integration, indicating that students had effectively harnessed Chat-GPT as a supportive writing aid. These findings suggest that with targeted instruction and support, students can substantially enhance their descriptive writing skills.

The data analysis indicates that all students showed a positive trajectory in their writing scores across both cycles. The average score progressed from 64 in the pre-test to 68.5 in post-test 1, followed by a further increase to 85.5 in post-test 2. These improvements highlight the effectiveness of the interventions implemented after the first cycle, which included the provision of concrete examples of descriptive paragraphs, the development of detailed guidelines for using Chat-GPT, and modifications to the teaching approach to enhance engagement.

The percentage increase for post-test 1 was calculated as follows:

$$P = \frac{68,5 - 64}{54,4} \times 100\%$$
$$P = 7,1\%$$

For post-test 2, the calculation yielded:

$$P = \frac{85,5 - 64}{64} \times 100\%$$
$$P = 33,6\%$$

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In summary, these findings confirm that integrating Chat-GPT significantly enhances students' descriptive writing skills. The substantial improvement from cycle 1 to cycle 2 validates the decision to continue with the second cycle, demonstrating that with appropriate support and resources, students can achieve notable advancements in their writing abilities.

Previous studies have indicated the potential benefits of AI tools in educational settings, particularly in enhancing student engagement and writing performance (Pandia & Sibarani, 2023). However, this research uniquely highlights the substantial impact of Chat-GPT specifically on descriptive writing, an area that has not been extensively explored in the existing literature. This distinction underscores the contribution of this study to the broader discourse on the integration of AI technologies in educational practices. The findings not only confirm the efficacy of AI tools in improving writing skills but also provide a framework for future research to explore the potential of such technologies across various dimensions of language education.
In conclusion, the integration of Chat-GPT into writing instruction offers promising avenues for enhancing students' descriptive writing capabilities, making it a valuable resource in the evolving landscape of educational technology.

The results of this study reveal significant developments in utilizing Chat-GPT as a tool to enhance students' descriptive writing skills. Initially, students displayed a moderate ability level, with a pre-test average score of 64. Following the first cycle, where students were introduced to Chat-GPT along with basic usage instructions, the average score increased to 68.5, marking a 7.1% improvement. Although this figure fell short of the 30% target, it underscores the positive potential of Chat-GPT in the descriptive writing learning process. Further analysis indicated improvements in clarity and cohesion, yet weaknesses in sensory details remained, suggesting that while Chat-GPT aided students in constructing descriptive paragraphs, it did not fully address the complexities of descriptive writing.

Reflecting on the first cycle prompted necessary enhancements for the second cycle, including a revised learning approach that emphasized concrete examples of sensory details alongside improved guidance on using Chat-GPT. This modification yielded impressive results, with the average post-test score rising to 85.5, representing a 33.6% increase from the pre-test. This not only surpassed the original target but also demonstrated notable advancements in the quality of students' writing, particularly in sensory detail, clarity, and cohesion. Observations during the study indicated that students became more confident and engaged in the writing process, generating a wider array of ideas.

However, it is essential to recognize that not all students experienced uniform improvements; some struggled to optimize their use of Chat-GPT, highlighting the need for a personalized approach and a longer adaptation period for certain individuals. This variation raises important considerations regarding the integration of AI technology in education. While Chat-GPT effectively improves descriptive writing, it is crucial to ensure that its implementation does not detract from the development of critical thinking and creativity. The teacher's role in guiding the use of AI is paramount, as it is essential that students understand the foundational principles of effective descriptive writing rather than becoming overly reliant on the tool.

Overall, this study showcases the significant potential of Chat-GPT in enhancing students' descriptive writing skills, emphasizing the importance of a careful and structured approach to implementation. Future research could further explore the long-term effects of Chat-GPT on writing skills and its applicability across diverse learning styles and abilities, thus contributing to a more comprehensive understanding of AI's role in education.

CONCLUSIONS

This classroom action research shows that the use of Chat-GPT in descriptive writing learning has a significant positive impact. Initial data shows that the average score of students

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reached 64. After cycle I was implemented, there was an increase of 7.1% as indicated by the average score on the post-test of 68.5. With this percentage, it means that cycle I cannot be said to be successful because research in this cycle is said to be successful if the average score of students increases by 30%. Research needs to be conducted in cycle II to find out the final results. In cycle II, there was an increase of 17% (85.5 - 68.5) from post-test I (64) or a total increase of 33.6%. This research can be said to be successful because the increase in students' writing results has exceeded 30%. Then, the results of field notes show that the classroom conditions during the teaching and learning process created a positive classroom atmosphere, and also made students creative in writing descriptively. Chat-GPT has proven to be very effective in improving three main aspects of descriptive writing: sensory detail, clarity, and cohesion. Students showed positive improvements in descriptive writing.

Throughout the study, there was a marked increase in student enthusiasm and engagement in the writing process. The use of Chat-GPT appeared to increase students' confidence in expressing their ideas in writing. The study also highlighted the importance of structured guidance and concrete examples in the implementation of Chat-GPT. Its effectiveness largely depends on how it is integrated into the curriculum and how students are guided in its use. Despite overall improvements, the study also revealed variation in individual student responses. The results suggest that Chat-GPT is most effective when used as a complement to, rather than a replacement for, traditional teaching methods. The combination of teacher guidance, classroom interaction, and AI assistance resulted in optimal learning outcomes. In conclusion, this study provides strong evidence that Chat-GPT, when implemented appropriately, can be an effective tool in improving students' descriptive writing skills. However, its success depends on careful integration with traditional teaching methods and adaptation to individual student needs. These findings pave the way for further exploration of the role of AI in education, particularly in developing academic writing skills, and challenge educators to rethink their teaching practices in this digital age.

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