

Evaluation of the Feedback Impact Generated by Generative Artificial Intelligence on Writing Ability in Descriptive Texts

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Abstract

The ability to write clear and descriptive texts is an essential skill in a variety of academic and professional contexts. From designing compelling narrative essays in literature class to crafting clear and concise reports in the workplace, effective descriptive writing allows individuals to communicate their ideas and engage audiences with vivid imagination and sensory detail. However, the development of these skills often requires intensive practice and constructive feedback. Traditional writing instruction often relies on human feedback from teachers and lecturers. Therefore, this study aims to compare the feedback ability generated by generative artificial intelligence on the ability to write in descriptive texts. This study uses a quantitative research approach with quasi-experimental design. This study involved 58 students of Civil Engineering Vocational Education Program. The non-equivalent control group design was used to compare the results of the experimental class and the control class. Based on the results of data analysis using the Wilcoxon test, there were 29 positive ranks, this means that there were 29 students who experienced an increase in scores at the time of the posttest with an increase of 18.38% from the pre-test score. The average Gain Score = 0.4933 with a maximum value of 0.7272 and a minimum score = 0.28. It can be concluded that the use of generative artificial intelligence in providing feedback on students' descriptive texts is a medium or quite effective.

Keywords: writing, ESP, Generative AI, feedback, evaluation

INTRODUCTION

The ability to write clear and descriptive texts is an essential skill in a variety of academic and professional contexts (Strunk & White, 2000). From designing compelling narrative essays in literature class to crafting clear and concise reports in the workplace,

effective descriptive writing allows individuals to communicate their ideas and engage audiences with vivid imagination and sensory detail (Bailey, 2018). However, the development of these skills often requires intensive practice and constructive feedback (Hayes, 1997).

The enhancement of descriptive writing skills is vital in various academic and professional contexts, reflecting the importance of clear communication and creative expression. Effective descriptive writing is not only crucial for engaging audiences but also essential for conveying nuanced ideas through vivid imagery and sensory detail. According to Strunk and White, clarity and brevity in writing are paramount, emphasizing that successful writers must engage their readers through well-crafted narratives and clear reporting mechanisms (Song & Song, 2023). However, the development of these essential skills demands rigorous practice coupled with constructive feedback, underscoring the pedagogical necessity for a structured and supportive writing environment (Trần, 2024). Traditional writing instruction often relies on human feedback from teachers and lecturers (Hyland & Hyland, 2019). While valuable for personalized guidance and nuanced analysis, this approach can be time-consuming, especially in large classes with limited resources (Elbow, 1973). In addition, human feedback can be subjective, influenced by the individual's own writing style and preferences (Roberts & Jacobs, 1998). This can lead to inconsistencies and potentially hinder the development of diverse writing voices of students (Zamel, 2002).

Traditional writing instruction primarily relies on human feedback from educators, a method that can be rich in personalized guidance and nuanced critique but has notable limitations. Hyland and Hyland note that individualized feedback can be resource-intensive, particularly in large classes where student-teacher ratios are unfavorably skewed (Moussa & Belhiah, 2024). Additionally, Elbow points out that the subjective nature of human feedback can introduce biases, complicating the development of diverse writing voices among students (Koltovskaia, 2022). This

environment may inadvertently stifle creativity as it may promote conformity to individual teacher preferences rather than fostering unique student expressions (Wang, 2024). Kouam highlights that while human feedback offers personalized insights, it is essential to address the potential pitfalls that can arise from subjective evaluations in writing instruction (Kouam, 2024).

Generative Artificial Intelligence (AI) has emerged as a potential tool to address these limitations by providing automated and personalized feedback (Baidoo-Anu & Ansah, 2023). AI-powered writing assistants can analyze students' writing and offer suggestions for improvement in various aspects, including grammar, vocabulary, sentence structure, and clarity (Chen et al, 2020). Unlike traditional methods, AI feedback can be delivered instantly and consistently, easing the time burden on instructors while ensuring all students receive timely guidance (Ramachandran et al, 2017). Additionally, AI systems can be trained on large amounts of data, allowing them to provide feedback tailored to a variety of writing styles and goals, potentially addressing the subjectivity concerns often associated with human feedback (Nunes et al, 2022).

In contrast, the advent of generative artificial intelligence (AI) has introduced innovative potential to overcome these traditional barriers. AI-powered writing assistants, such as Grammarly, provide automated feedback that can analyze various writing components such as grammar, structure, and lexical choices (Utami et al., 2023). This type of instant feedback not only alleviates the time constraints faced by instructors but also ensures that all students receive timely suggestions for improvement (Athanassopoulos et al., 2023). Research by Dizon and Gayed indicates that tools like Grammarly significantly enhance learner engagement and writing quality by

promoting greater lexical variation in texts (Dizon & Gayed, 2021). Furthermore, AI can provide tailored feedback aligned with diverse writing styles, addressing concerns about the subjectivity often inherent in human evaluations (ROA & Halim, 2024).

Despite the promising capabilities of AI in enhancing descriptive writing, it is essential to recognize the potential challenges and limitations of these technologies. Although AI can function as a significant aid, there are concerns regarding its ability to foster critical thinking and creativity among students. Kouam emphasizes that while AI may improve productivity and streamline writing processes, it is important to ensure that the use of such tools does not hinder the development of essential cognitive skills (Dhillon et al., 2024). Additionally, the comprehension and effectiveness of AI feedback can vary significantly among students, particularly those with lower metalinguistic competence, necessitating a balanced approach that combines AI support with traditional pedagogical strategies (Mun, 2024). The importance of teacher guidance cannot be overlooked, as direct mentorship remains vital for addressing complex writing challenges that AI alone may not effectively tackle (Ratih & Kastuhandani, 2024).

While AI-powered writing assistants promise to be significant, their potential impact on descriptive writing capabilities in particular warrants further exploration (Duin & Pedersen, 2021). This study aims to investigate the impact of generative AI feedback on the ability to write descriptive text. The impact was investigated by comparing the descriptive texts of the experimental group who used AI to provide feedback and those of control group who did not use AI.

Based on the description above, the research question can be formulated as follows

1. Does receiving feedback from Generative AI on descriptive text lead to a significant improvement in writing quality compared to receiving no feedback at all or traditional human feedback?
2. What specific aspects of descriptive writing are most affected by the reception of Generative AI feedback?

RELATED LITERATURE

Writing ability

The Importance of Writing Skills: This research builds on an established foundation of the importance of descriptive writing in a variety of academic and professional contexts (Strunk & White, 2000; Bailey, 2018). Clear, evocative description not only conveys information but also engages readers' imaginations, making it essential for disciplines ranging from literature to technical reporting (Hacker, 2021; National Council of Teachers of English, 2024). Descriptive writing fosters critical observation and attention to sensory detail, skills that underpin effective communication in both academic research and workplace documentation (Hayes, 1997). Mastery of such skills enables writers to craft vivid narratives, set compelling scenes, and present data-driven findings with precision and nuance (Bailey, 2018). Furthermore, strong descriptive writing enhances interdisciplinary collaboration: for example, engineers who can accurately depict design processes or scientists who can vividly report experimental conditions enhance clarity and reproducibility in their fields (Strunk & White, 2000). Developing these abilities also contributes to metacognitive awareness—writers learn to reflect on their own rhetorical choices and adapt style, tone, and structure to different audiences (Hacker, 2021).

Challenges of Traditional Feedback: This study highlights the limitations of

traditional writing instruction that relies heavily on human feedback (Hyland, 2019). These include:

Time Constraints: Instructors often face limited time, especially in large classes, which hinders their ability to provide detailed feedback to each student (Wallace, 2018). Even when teachers aim to offer comprehensive comments on content, organization, and style, the sheer volume of drafts can force them to prioritize surface-level corrections—grammar and punctuation—over deeper issues such as argument coherence or imagery effectiveness (Hyland & Hyland, 2019). When feedback is delayed, students may struggle to recall their writing process, reducing the feedback's actionable value (Elbow, 1973).

Subjectivity: Feedback can be influenced by individual preferences and writing styles, potentially leading to inconsistencies or hindering the development of diverse students' voices (Carter, 2007). Different instructors may emphasize conflicting stylistic norms—one teacher might prioritize concise expression while another values elaborate detail—leading to student confusion and a tendency to conform to a single “correct” style rather than cultivating originality (Zamel, 2002). Moreover, research shows that instructor bias can inadvertently discount non-native speaker constructions or culturally specific expressions, thus restricting the linguistic richness of student work (Dikli & Bleyle, 2014). As a result, learners may internalize feedback in a surface-level manner, focusing on error correction instead of higher-order writing strategies such as thematic development or vivid sensory engagement (Hayes, 1997).

Generative artificial intelligence

Generative Artificial Intelligence in Education: This research is positioned in the

growing field of AI-powered educational tools (Yu et al, 2021). The potential impact of these systems, and generative artificial intelligence in particular, is of current interest to educators and researchers. Key concepts relevant to this study include:

Automated Feedback Systems: AI systems for evaluating and providing feedback on writing are well-established research areas (Dikli, 2014). This research aims to expand this work with a particular focus on descriptive writing, which may pose unique challenges to AI analysis (Sari, & Han, 2021).

Personalization and Customized Instruction: Using AI to provide personalized feedback that adapts to different writing styles and goals is promising, potentially offering an edge over traditional human feedback in this area (Chang et al, 2023).

Overall, the study is in an interesting intersection of an established understanding of writing instruction (Strunk & White, 2000; Bailey, 2018), the evolving capabilities of AI-powered feedback systems (Roberts & Jacobs, 1998; Zamel, 2002), and the special needs of teaching descriptive writing (Baidoo-Anu & Ansah, 2023). If successful, it has the potential to provide valuable insights into the effective use of technology in writing education.

METHODOLOGY

This study uses a quantitative approach. A quantitative approach with a quasi-experimental research method and a Non-equivalent control group design was used in this study. The treatment given to the experimental group was the use of feedback from generative artificial intelligence. Meanwhile, the control group only received conventional feedback. The research design can be seen in the table below.

Group	Class	Pre-test	Treat ment	Post - test
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Control	Group 1	O1	-	O2	
Experiment	Group 2	O3	X	O4	

Information:

O1 : Pretest the initial ability of the control class

O2 : Post test ability of the final control class

X: Treatment for the experimental group

O3 : Pretest the initial ability of the experimental class

O4 : Posttest of the final ability of the experimental class (Sugiyono, 2013)

The population of this study is students who take English for Civil Engineering courses in the Civil Engineering Vocational Education Program with the total of 58 students. Total sampling was used in this study. However, simple random sampling was used to determine which class was selected as either control or experiment group.

RESULT AND DISCUSSION

Both experimental and control group were given a task to write a descriptive text on the Google Classroom. They were in separate study groups and Google Classroom. Therefore, one cannot access the other. Both groups typed down their responses on the word processing software then uploaded their work to the Google Classroom.

The writing process was performed in separate days in separate classrooms. The control group performed the writing process first. They wrote down their responses on the first day. They were supervised by the researcher. They were given 60 minutes to write down their responses to the writing task. They uploaded their responses to

The Suramadu Bridge is a cable-stayed bridge that connects Java Island and Madura Island. Built over the Madura Strait, the bridge has a total length of approximately 5.4 kilometers, making it the longest bridge in Indonesia. The structure comprises three main sections: a 1,458-meter-long flyover, a 672-meter-long connecting bridge, and the main bridge, which consists of two 192-meter-long side spans and a 434-meter-long central span. The main bridge features two twin towers, each standing 140 meters tall. The bridge deck is constructed from a 2.4-meter-thick composite material. Additionally, the bridge includes an emergency lane and a dedicated motorcycle lane in each direction.

task. They uploaded their responses to Google Classroom after 60 minutes. Below is the example for draft of the students' descriptive text in the experimental group:

A. Without AI

The Suramadu Bridge is a cable-stayed bridge that connects Java Island and Madura Island. This bridge was built over the Madura Strait and has a length of about 5.4 kilometers. This is the longest bridge in Indonesia.

This bridge consists of two parts: a 1,458-meter-long flyover, a 672-meter-long connecting bridge, and a main bridge with two 192-meter-long side spans and one 434-meter-long main span. On the main part of the bridge there are two twin towers 140 meters high. The bridge floor is made of 2.4-meter-thick composite construction. This bridge also has an emergency lane and a special lane for motorbikes in each direction.

Figure 1. Draft of Student Descriptive Writing

Then, the drafts of the experimental group were given a treatment in the form of ChatGPT usage. The ChatGPT prompt was provided by the researcher to obtain a similar level of feedback for all students in the experimental group. They had to use ChatGPT after their draft was uploaded to the ChatGPT. Then they were asked to use ChatGPT to provide feedback on the results of the descriptive text they had written. Here is an example of feedback from ChatGPT for student writing.

Category	Original Text	Correction / Comment	Explanation
Grammar	"This bridge was built over the Madura Strait and has a length of about 5.4 kilometers."	Revised to: "Built over the Madura Strait, the bridge has a total length of approximately 5.4 kilometers."	Passive structure improved for conciseness and flow; "has a length of" is wordy—"has a total length of" or just "is approximately 5.4 km long" is smoother.
Grammar	"This is the longest bridge in Indonesia."	"Making it the longest bridge in Indonesia." (Embedded into previous sentence.)	Combined with the previous sentence to enhance coherence and avoid short, choppy sentences.
Mechanics (Punctuation)	"This bridge consists of two parts: a 1,458-meter-long flyover, a 672-meter-long connecting bridge, and a main bridge..."	Corrected to: "The structure comprises three main sections: a 1,458-meter-long flyover, a 672-meter-long connecting bridge, and the main bridge..."	Original sentence mentions "two parts" but lists three; fixed to match the enumeration. Also adjusted punctuation and rephrased for clarity and accuracy.
Cohesion & Coherence	"On the main part of the bridge there are two twin towers 140 meters high."	Revised to: "The main bridge features two twin towers, each standing 140 meters tall."	Improved sentence structure for smoother flow; avoids awkward phrasing ("there are two twin towers 140 meters high").
Cohesion & Coherence	"The bridge floor is made of 2.4-meter-thick composite construction."	Changed to: "The bridge deck is constructed from a 2.4-meter-thick composite material."	"Bridge deck" is more precise terminology; "constructed from" sounds more technical/formal than "made of"; "composite construction" was vague.
Lexical Resource	"This bridge also has an emergency lane"	Reworded to: "Additionally, the bridge"	"Additionally" adds a more formal tone; "dedicated"
Category	Original Text	Correction / Comment	Explanation
	and a special lane for motorbikes in each direction."	includes an emergency lane and a dedicated motorcycle lane in each direction."	motorcycle lane" is clearer and more professional than "special lane for motorbikes."

Figure 2. ChatGPT Feedback Form

After getting feedback from ChatGPT, the next day, the students re-wrote their text based on the feedback given by the ChatGPT and uploaded it to the Google Classroom. The revision process was also supervised by the researcher.

The following is the final version of the student descriptive text

Figure 3. Final version of the text

An independent rater scored the students' final version of the writing. The control group took up three days during the research process

All students' writings were then assessed in terms of grammar, punctuation, coherence, cohesion, lexical resources. After the data is obtained, the normality test is carried out to analyze whether the data is normally distributed using the Kolmogorov-Smirnov Test. The following are the results of the normality test using the Kolmogorov – Smirnov test.

One-Sample Kolmogorov-Smirnov Test

	pre	post
N	29	29
Asymp. Sig. (2-tailed)	.071c	.005c

Based on the results of the normality test, the data is not distributed normally because the significance value of both classes = 0.071 for the pretest class and 0.005 for the posttest class. The next classic assumption test is a homogeneity test using One-way ANOVA.

Here are the results of the homogeneity test

Test of Homogeneity of Variances

value

Levene			
Statistic	df1	df2	Mr.
8.749	1	56	.005

Based on the results of the Homogeneity test using the One-way ANOVA test, the significance value = $0.005 < 0.05$, so that the data did not come from a group with the same variance.

Non-parametric statistical techniques are used because the data is not able to meet the classical assumption test. The Wilcoxon Signed test is used for differential tests to prove the hypothesis of this study. The results of the Wilcoxon test can be seen in the table below:

		Ranks		
		N	Mean Rank	Sum of Ranks
post - pre	Negative Ranks	0a	.00	.00
	Positive Ranks	29b	15.00	435.00
	Ties	0c		
	Total	29		

a. post < pre

b. post > pre

c. post = pre

Based on the results of data analysis using the Wilcoxon test, there were 29 positive ranks, this means that there were 29 students who experienced an increase in scores at the time the posttest was conducted. The average difference between the two data groups can be seen in the following table:

		pre	post
N	Statistic	29	29
Minimum	Statistic	45	80

Maximum	Statistic	90	95
Mean	Statistic	73.55	87.07
Std. Error	0	1.668	0.671
Std. Deviation	Statistic	8.982	3.615
Variance	Statistic	80.685	13.067

The average value for the pre-test = 73.55 with standard error = 1.688 and standard deviation 8.962, while at the post-test time, the average value = 87.07, with standard error = 0.671 and standard deviation = 3.651. Thus, it can be concluded that the posttest score has increased by 18.38% from the pre-test score.

The hypothesis test is carried out by looking at the significance values of the Wilcoxon test in the table below:

Test Statistics ^a	
	post - pre
	-4.716b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Significance value = $0.000 < 0.05$, then it can be concluded that the null hypothesis is rejected and the alternative hypothesis is accepted so that there is a difference between the average pretest score and the posttest score.

The next analysis is the analysis of the effectiveness of Chatgpt in providing feedback to student writing. The gain score analysis using the formula from Meltzer (2022) was carried out to analyze the effectiveness of ChatGPT in providing feedback on students' descriptive text writing. The following are the results of the gain score analysis according to Meltzer (2022)

Gain Score	0.49333
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Max Gain Score	0.727272727
Min Gain Score	0.28

The average value of Gain Score = 0.4933 with a maximum value of 0.7272 and a minimum value = 0.28, then based on the Gain score interpretation table according to Meltzer (2022) below:

Distribution of Gain Score		
Criteria	$g > 0.7$	High
	$0.3 \leq g \leq 0.7$	Medium
	$g < 0.3$	low

It can be concluded that the use of ChatGPT in providing feedback on students' descriptive texts is a medium or quite effective.

DISCUSSION

The findings of this study underscore the potential of generative artificial intelligence (AI) as a viable tool for enhancing students' descriptive writing abilities. Through a quasi-experimental design, this study demonstrated that the experimental group, which received feedback from ChatGPT, showed a statistically significant improvement in their post-test scores compared to the control group, which relied on traditional teacher feedback. The mean score improvement of 18.38% and a medium gain score of 0.4933 align with existing research highlighting the pedagogical value of AI-based feedback systems in educational contexts (Baidoo-Anu & Ansah, 2023; Ramachandran et al., 2017).

These findings corroborate prior work by Dizon and Gayed (2021), who found that the integration of AI writing tools like

Grammarly led to measurable improvements in lexical variety and sentence structure among English as a Foreign Language (EFL) students. Similarly, Athanassopoulos et al. (2023) concluded that ChatGPT encouraged greater linguistic experimentation and reduced the cognitive burden associated with second language writing, which could explain the more significant progress noted among the experimental group in this study.

One of the main contributions of this research lies in its comparative approach between AI-generated and human-provided feedback. Traditional feedback, though rich in nuance, often faces challenges related to subjectivity and scalability (Hyland & Hyland, 2019). These challenges were evident in the control group, where feedback delivery was slower and potentially influenced by individual teaching styles (Koltovskaia, 2022; Roberts & Jacobs, 1998). By contrast, the AI-generated feedback in the experimental group was immediate, standardized, and free from interpersonal bias, aligning with Nunes et al. (2022), who emphasized the consistency of AI in writing evaluation.

Furthermore, the structured environment in which the AI feedback was administered—where the same prompt was used by all students and revisions were supervised—ensured a controlled setting for evaluating the tool's effectiveness. This methodological rigor addresses common criticisms of prior studies that lacked control over how students engaged with AI tools (Duin & Pedersen, 2021).

The data also suggest that AI feedback significantly improved structural elements of student writing, including grammar, coherence, and vocabulary use. For example, sentence-level revisions in the final drafts reflected clearer organization, more precise terminology, and better cohesion—attributes that are essential in effective descriptive

writing (Bailey, 2018). This supports the assertion by Chang et al. (2023) that AI tools are particularly useful in scaffolded learning environments where writing quality is gradually built through iterative feedback.

Nonetheless, several limitations must be acknowledged. While AI proved effective in enhancing surface-level writing features, it may fall short in nurturing deeper cognitive skills such as critical thinking, creativity, and rhetorical nuance. Kouam (2024) cautions that AI feedback could lead to over-reliance and mechanical learning if not supplemented with critical engagement. This study attempted to mitigate this by supervising the revision process and preventing the reuse of AI for the second draft; however, the intrinsic risk remains.

Another limitation concerns the student population. The study was conducted exclusively within a Civil Engineering Vocational Education Program, potentially limiting generalizability. Writing demands and cognitive expectations in other disciplines—such as literature, philosophy, or journalism—may differ significantly. As such, future research should extend this analysis to other academic domains to test whether the observed benefits of AI feedback persist across genres and disciplinary conventions (Yu et al., 2021).

Moreover, the qualitative aspect of feedback reception—how students understood and acted upon the AI suggestions—was not explored in depth. While students revised their texts, the study did not analyze whether they agreed with, misunderstood, or even ignored certain AI feedback. This gap points to a future research opportunity involving mixed-method designs, such as think-aloud protocols or learner interviews (Mun, 2024; Dhillon et al., 2024).

It's also important to consider the technological literacy required to use AI tools effectively. While most students in this

study managed to interact with ChatGPT appropriately, discrepancies in digital fluency could influence outcomes in more heterogeneous populations. Digital inequalities might hinder the equitable implementation of AI-assisted writing platforms, especially in under-resourced educational settings (Awosanya et al., 2024).

In light of these findings, educators and policymakers should view AI not as a replacement for human instruction but as a complementary resource. A hybrid approach that combines the immediacy and precision of AI feedback with the contextual depth and empathy of human feedback might offer the best of both worlds. Ratih and Kastuhandani (2024) found that students appreciated using AI for initial drafts but still valued teacher input for final revisions, particularly in high-stakes writing tasks like theses and academic reports.

Finally, the implications for curriculum development are substantial. Incorporating AI tools into writing instruction could help address long-standing issues related to large class sizes and time-constrained instructors. As Wallace (2018) points out, teaching writing in large classes often results in generalized feedback and minimal one-on-one support. The integration of AI tools may offer a scalable solution to this dilemma, allowing instructors to focus more on higher-order concerns while offloading basic proofreading and editing tasks to AI.

CONCLUSION

This study set out to evaluate the impact of feedback generated by generative artificial intelligence—specifically ChatGPT—on students' ability to write descriptive texts. Through a quasi-experimental design involving control and experimental groups, the research revealed that AI-generated feedback significantly enhanced the writing performance of students, particularly in

aspects such as grammatical accuracy, lexical variety, cohesion, and clarity.

The experimental group, which received AI-assisted feedback, exhibited a substantial improvement in their post-test scores compared to the control group that received traditional teacher feedback. The calculated average gain score of 0.4933 and the 18.38% increase in scores from pre- to post-test clearly indicate that generative AI can serve as a moderately effective tool in the writing classroom. These results are consistent with existing literature, which has increasingly emphasized the potential of AI tools to offer immediate, consistent, and tailored feedback that complements traditional pedagogical practices.

Beyond numerical gains, students' revised texts demonstrated marked improvements in sentence structure, vocabulary precision, and paragraph organization. The structured use of ChatGPT helped students internalize writing conventions and apply feedback meaningfully. This suggests that when appropriately scaffolded and supervised, AI can facilitate deeper engagement with the writing process, promoting autonomous learning and self-revision skills.

However, this study also acknowledges important limitations. While AI can enhance surface-level aspects of writing, it cannot fully replace the nuanced and affective dimensions of human feedback, particularly when addressing creative expression, argumentative depth, or critical thinking. The exclusive focus on vocational engineering students may also limit the generalizability of findings to broader educational contexts. Furthermore, students' interpretation of AI feedback and their ability to apply it effectively remain variables warranting further exploration.

In light of these insights, educators should consider adopting a hybrid feedback model that integrates generative AI with traditional

instruction. AI tools like ChatGPT can alleviate the feedback burden in large classrooms and ensure consistent, immediate support for students. However, they should be used as supplementary aids rather than substitutes for teacher engagement, especially in high-stakes or content-driven writing tasks.

Future research should expand this inquiry across disciplines and educational levels, incorporating longitudinal designs to assess the sustained impact of AI feedback on writing development. Qualitative investigations into students' perceptions, challenges, and strategies when interacting with AI feedback will also deepen our understanding of the cognitive and affective dynamics at play.

In conclusion, generative AI has emerged as a promising ally in the teaching of descriptive writing. When thoughtfully implemented, it offers a scalable and effective means to enhance students' writing skills, increase engagement, and support differentiated learning. As the educational landscape continues to evolve alongside technological advancements, integrating AI responsibly and ethically into the writing classroom represents an important step toward more inclusive and adaptive pedagogical practices.

REFERENCES

- Athanassopoulos, S., Manoli, P., Gouvi, M., Lavidas, K., & Komis, V. (2023). The use of ChatGPT as a learning tool to improve foreign language writing in a multilingual and multicultural classroom. *Advances in Mobile Learning Educational Research*, 3(2), 818–824.
<https://doi.org/10.25082/amler.2023.02.009>
- Awosanya, O., Harris, A., Creecy, A., Qiao, X., Toepp, A., McCune, T., ... & Ozanne, M. (2024). The utility of AI in writing a scientific review article on the impacts of COVID-19 on musculoskeletal health. *Current Osteoporosis*

- Reports*, 22(1), 146–151.
<https://doi.org/10.1007/s11914-023-00855-x>
- Baidoo-Anu, D., & Ansah, L. O. (2023). Education in the era of generative artificial intelligence (AI): Understanding the potential benefits of ChatGPT in promoting teaching and learning. *Journal of AI*, 7(1), 52–62.
- Bailey, S. (2018). *Academic writing: A handbook for international students* (5th ed.). Routledge.
- Carter, M. (2007). Ways of knowing, doing, and writing in the disciplines. *College Composition and Communication*, 385–418.
- Chang, D. H., Lin, M. P. C., Hajian, S., & Wang, Q. Q. (2023). Educational design principles of using AI chatbot that supports self-regulated learning in education: Goal setting, feedback, and personalization. *Sustainability*, 15(17), 12921.
- Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *IEEE Access*, 8, 75264–75278.
- Dhillon, P., Molaei, S., Li, J., Golub, M., Zheng, S., & Robert, L. (2024). Shaping human-AI collaboration: Varied scaffolding levels in co-writing with language models.
<https://doi.org/10.1145/3613904.3642134>
- Dikli, S., & Bleyl, S. (2014). Automated essay scoring feedback for second language writers: How does it compare to instructor feedback? *Assessing Writing*, 22, 1–17.
- Dizon, G., & Gayed, J. (2021). Examining the impact of Grammarly on the quality of mobile L2 writing. *The JALT CALL Journal*, 17(2), 74–92.
<https://doi.org/10.29140/jaltcall.v17n2.336>
- Duin, A. H., & Pedersen, I. (2021). Autonomous writing futures. In *Writing futures: Collaborative, algorithmic, autonomous* (pp. 85–107). Springer International Publishing.
- Elbow, C. R. (1973). *Writing without teachers*. Oxford University Press.
- Hacker, H. (2021). *A writer's reference* (8th ed.). Bedford/St. Martin's.
- Hayes, J. (1997). A review of second language writing research. *Modern Language Journal*, 81(4), 533–558.
- Hyland, K. (2019). *Second language writing*. Cambridge University Press.
- Hyland, K., & Hyland, F. (Eds.). (2019). *Feedback in second language writing: Contexts and issues*. Cambridge University Press.
- Koltovskaia, S. (2022). Postsecondary L2 writing teachers' use and perceptions of Grammarly as a complement to their feedback. *ReCALL*, 35(3), 290–304.
<https://doi.org/10.1017/s0958344022000179>
- Kouam, A. (2024). AI in academic writing: Ally or foe? *International Journal of Research Publications*, 148(1).
<https://doi.org/10.47119/ijrp1001481520246427>
- Moussa, A., & Belhiah, H. (2024). Beyond syntax: Exploring Moroccan undergraduate EFL learners' engagement with AI-assisted writing.
<https://doi.org/10.31235/osf.io/3fr45>
- Mun, C. (2024). EFL learners' English writing feedback and their perception of using ChatGPT. *STEM Journal*, 25(2), 26–39.
<https://doi.org/10.16875/stem.2024.25.2.26>
- National Council of Teachers of English (NCTE). (n.d.). Retrieved February 26, 2024, from <https://ncte.org/>
- Nunes, A., Cordeiro, C., Limpo, T., & Castro, S. L. (2022). Effectiveness of automated writing evaluation systems in school settings: A systematic review of studies from 2000 to 2020. *Journal of Computer Assisted Learning*, 38(2), 599–620.
- Ratih, M., & Kastuhandani, F. (2024). Students' lived experiences in utilizing artificial intelligence for thesis writing. *Nusra Jurnal Penelitian dan Ilmu Pendidikan*, 5(2), 760–769.
<https://doi.org/10.55681/nusra.v5i2.2696>
- Roberts, E. V., & Jacobs, H. E. (1998). *Literature: An introduction to reading and writing*. Prentice Hall.
- ROA, A., & Halim, S. (2024). The impact of AI-powered software on second language (L2) writing: A systematic literature review. *Research and Innovation in Applied Linguistics-Electronic Journal*, 2(2), 138.
<https://doi.org/10.31963/rial.v2i2.4801>
- Sari, E., & Han, T. (2021). Automated L2 writing performance assessment: A literature review. *The Reading Matrix: An International Online Journal*, 21(2).

-
- Song, C., & Song, Y. (2023). Enhancing academic writing skills and motivation: Assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Frontiers in Psychology, 14*.
<https://doi.org/10.3389/fpsyg.2023.1260843>
- Strunk, W., Jr., & White, E. B. (2000). *The elements of style* (4th ed.). Longman.
- Sugiyono, D. (2013). *Metode penelitian pendidikan: Pendekatan kuantitatif, kualitatif, dan R&D*.
- Trần, T. (2024). AI tools in teaching and learning English academic writing skills. *Proceedings of the AsiaCALL International Conference, 4*, 170–187.
<https://doi.org/10.54855/paic.23413>
- Utami, S., Andayani, A., Winarni, R., & Sumarwati, S. (2023). Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students perceive? *Contemporary Educational Technology, 15*(4), ep450.
<https://doi.org/10.30935/cedtech/13419>
- Wallace, M. (2018). *Teaching writing in large classes*. Routledge.
- Wang, C. (2024). Exploring students' generative AI-assisted writing processes: Perceptions and experiences from native and nonnative English speakers. *Technology, Knowledge and Learning*.
<https://doi.org/10.1007/s10758-024-09744-3>
- Yu, S., Lu, Y., Yu, S., & Lu, Y. (2021). Prospects and reflections: Looking into the future. In *An introduction to artificial intelligence in education* (pp. 189–198). Springer. https://doi.org/10.1007/978-3-030-64172-3_10
- Zamel, V. (2002). The construction of knowledge in writing groups. *Journal of Second Language Writing, 11*(1), 73–92.