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Judul Artikel yang direview:	:	*Comparing AI-based and Peer-based Feedback in Teaching the CaRS Model: A Quasi-Experimental Study on Postgraduate Academic Writing*
Bulan, Tahun Artikel yang direview	:	Agustus 2025 (1st *Round*)

UIRmail Sri Wahyuni <wahyunis@edu.uir.ac.id>

Manuscript ID: IJIET-18874 – Article Review Request

1 message

Ms. Alice Loh <alice.loh@ejournal.net> Mon, Aug 18, 2025 at 5:02 PM
To: Wahyuni Sri <wahyunis@edu.uir.ac.id>

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Submission URL: https://ojs.ejournal.net/index.php/ijiet/invitation/accept?id=47920&key=Pkv7sR

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Ms. Alice Loh

alice.loh@ejournal.net

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International Journal of Information and Education Technology

Review: Comparing AI-based and Peer-based Feedback in Teaching the CaRS Model: A Quasi-Experimental Study on Postgraduate Academic Writing

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Comparing AI-based and Peer-based Feedback in Teaching the CaRS Model: A Quasi-Experimental Study on Postgraduate Academic Writing

Abstract

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- ○ Marginal

- Poor

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- Acceptable
- Marginal
- Poor

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- Good
- Acceptable
- Marginal
- Poor

Quality of Presentation *

- Excellent
- Good
- Acceptable
- Marginal
- Poor

Comments to Authors *

My Submissions as Author

This manuscript presents a timely and relevant study comparing AI-generated and peer-based feedback within the CaRS model framework, addressing an underexplored area of postgraduate academic writing pedagogy. The design is methodologically sound, with clear procedures, validated instruments, and appropriate statistical analyses, though the small sample size, lack of randomization, and focus only on introductions somewhat limit generalizability. The paper is well-structured and clearly written, but certain sections are repetitive, and the presentation would benefit from tighter phrasing, inclusion of visuals (e.g., research design or CaRS model diagram), and fuller reporting of perception survey results. The references are comprehensive and current, appropriately

Comments to Editor (will not be visible by author)

This is a well-structured and timely study comparing AI-generated and peer-based feedback within a genre-based academic writing framework. The contribution is meaningful, particularly for postgraduate EFL contexts, though limited in scope and generalizability. I recommend Minor Revisions, as the paper requires stylistic tightening, stronger integration of student perception data, and clearer discussion of pedagogical

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Comparing AI-based and Peer-based Feedback in Teaching the CaRS Model: A Quasi-Experimental Study on Postgraduate Academic Writing

***Abstract*—This study investigates the comparative effectiveness of AI-generated and peer-based feedback in improving postgraduate students' academic writing, particularly in constructing research article introductions using the Create-a-Research-Space (CaRS) model. Drawing on a quasi-experimental design, the research involved 41 students enrolled in an academic writing course at an Islamic university in Indonesia. Participants were divided into two existing classes: one received AI-assisted feedback via ChatGPT with structured prompts, while the other engaged in guided peer review. Both groups completed pretest and posttest drafts, assessed using a validated CaRS rubric evaluating rhetorical moves. The results revealed significant improvements in both groups' posttest scores, with no statistically significant difference between them. This indicates that AI-generated feedback, when paired with clear instructional prompts, can be as effective as peer feedback in supporting students' ability to apply rhetorical structures in genre-based academic writing. These findings offer important pedagogical implications, especially for writing instructors in resource-constrained contexts. Incorporating AI tools like ChatGPT into writing instruction may enhance students' access to timely and focused feedback, complementing human interaction. The study addresses a gap in the literature by comparing feedback modes within a structured genre-based framework and suggests further research into long-term outcomes and the emotional dimensions of feedback engagement.**

***Keywords*—academic writing, AI-generated feedback, CaRS model**

I. Introduction

In the landscape of higher education, the ability to write for academic publication is becoming increasingly essential, particularly for postgraduate students in non-English-speaking countries [1]. As scientific output becomes a global benchmark for academic success, universities are incorporating scholarly writing into their core curricula, not only as a skill-building exercise but also as a graduation requirement [2]. In Indonesian Islamic universities, for instance, students enrolled in postgraduate programs are now expected to publish articles in academic journals before completing their degrees [3]. However, for many students, especially those with limited exposure to academic English discourse, composing a well-structured article remains a formidable challenge. The introduction section, in particular, often fails to reflect the expected rhetorical organization, resulting in weak argumentation and unclear research positioning [4], [5].

To address these issues, writing instructors have turned to genre-based approaches that offer explicit structural models. One such widely accepted framework is the Create-a-Research-Space (CaRS) model proposed by Swales (1990), which guides writers to structure their introductions through three rhetorical moves: establishing a research territory, identifying a niche, and occupying the niche [6]. Numerous studies have supported the effectiveness of genre-based instruction in enhancing students' rhetorical awareness and writing quality [7], [8]. Yet, while genre pedagogy provides a strong foundation, its successful implementation often hinges on the quality and immediacy of feedback students receive throughout the writing process.

Recent years have seen a surge in the integration of artificial intelligence (AI), particularly large language models like ChatGPT, in academic writing instruction [9]. AI tools are increasingly used to generate feedback, detect gaps in rhetorical structure, and even suggest improvements in student writing. Several studies have explored the role of ChatGPT in academic support contexts. Fang et al. (2025) and Nguyen (2025), for instance, found that AI-generated feedback in ESL writing classes could match the quality of peer review in terms of clarity, motivation, and writing outcomes. Similarly, Escalante (2023) highlighted ChatGPT's potential to provide accurate feedback aligned with expert human reviewers. However, other studies warn that over-reliance on AI tools may limit students' critical thinking and self-regulatory writing behaviors [13], [14]. More importantly, the pedagogical effectiveness of AI-based feedback compared to peer feedback has rarely been examined in structured genre instruction, particularly in writing introduction sections using the CaRS model.

While previous research has acknowledged the value of both AI-generated and peer feedback in writing instruction, little is known about how these approaches compare in helping students develop rhetorical awareness, particularly when learning to structure academic texts using models like CaRS. This lack of evidence is especially relevant in EFL settings, where digital tools such as ChatGPT are increasingly used in the classroom, yet their impact has not been rigorously evaluated in structured, genre-based instruction. To address this gap, the present study explores whether there is a meaningful difference between AI-based and peer-based feedback in supporting postgraduate students as they craft introduction sections of research articles. The study focuses on how well students apply the rhetorical moves outlined in the CaRS model and aims to answer the following research question: To what extent does the use of AI-generated feedback differ from peer feedback in helping postgraduate learners construct effective research article introductions?

II. Literature Review

Genre-Based Instruction and the CaRS Model

Swales's Create-a-Research-Space (CaRS) model (1990) remains foundational in teaching the structure of research article introductions through three rhetorical moves: establishing a research territory, identifying a niche, and occupying that niche. Genre-based instruction grounded in this framework has been empirically shown to enhance

graduate students' rhetorical awareness and structural competence, making their academic writing more persuasive and aligned with publication expectations [8], [15].

Peer Feedback in Academic Writing

Peer feedback interventions in academic settings yield multiple benefits: enhanced critical thinking, increased motivation, social learning, self-regulatory revision, and genre awareness. Longitudinal studies with medical and English major students in China revealed that peer-reviewed writing led to significant improvements in coherence, cohesion, lexical richness, and accuracy over time [16]. Experimental evidence further demonstrates that when students are trained in feedback literacy and use structured rubrics, peer feedback can outperform traditional instructor-only feedback in advancing academic writing quality [17].

AI-Based Feedback Using ChatGPT

The rapid integration of ChatGPT as a feedback tool in writing education has generated both promise and skepticism. Yoon et al. (2023) found that ChatGPT-generated feedback on coherence and cohesion in ELL essays tended to be abstract and generic, lacking specificity required for deeper revision. Conversely, Ozdere (2024) reported that combined with targeted prompt training, ChatGPT can significantly boost writing motivation, self-efficacy, and organizational structure among EFL learners. A randomized control study using AI-generated feedback systems also showed substantial improvements in organization and content development, supporting the intervention's effectiveness in critical writing contexts [20].

Comparing Peer vs AI Feedback

Empirical comparisons show nuanced trade-offs. Jacobsen and Weber (2023) found that with optimal prompting, ChatGPT can generate feedback with greater clarity and specificity than some human novices. However, Steiss et al. (2024) compared 200 essays reviewed by humans and ChatGPT and concluded that while ChatGPT performed similarly in criterion-based feedback, human reviewers provided richer contextual and genre-specific guidance overall.

Identified Gap and Justification

Recent advances in writing instruction have brought increased attention to the use of both AI-generated and peer feedback. However, studies comparing their specific impact on students' ability to apply rhetorical structures—such as the CaRS model—are still scarce. Most research to date has concentrated on general writing skills, grammatical accuracy, or learner motivation, typically involving undergraduate students or mixed-genre assignments. What remains largely underexplored is how these feedback strategies influence postgraduate learners in producing well-structured introductions, particularly in academic settings where publishing is a graduation requirement and English is not the students' first language.

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III. Materials and Methods

Research Design and Approach

This research adopted a quasi-experimental approach by working with two intact groups of postgraduate students who were taking an academic writing course. The primary objective was to examine how AI-generated feedback, provided through ChatGPT, compared with peer-based feedback in helping students develop stronger research article introductions. Both forms of feedback were evaluated in relation to students' use of the CaRS (Create a Research Space) model introduced by Swales (1990), which outlines key rhetorical moves for structuring academic introductions.

Participants

The study involved 41 postgraduate students (S2 level) from the Islamic Education Study Program (PAI) at a state Islamic university on Lombok Island, Indonesia. All participants were enrolled in a course titled Seminar Proposal and Academic Publication during the second semester of the 2024/2025 academic year. The course was structured into two segments: meetings 1 to 8 focused on proposal writing, while meetings 9 to 16 covered academic publication. This research was conducted during meetings 9 to 12. Students were assigned to groups based on their existing class enrollment: Class B (n = 20) received AI-generated feedback through ChatGPT, while Class C (n = 21) participated in peer review activities facilitated by their classmates and lecturer. None of the students had previously received formal instruction in the CaRS model. The research activities were integrated into regular course sessions, and all participants provided informed consent.

Instruments

Several instruments were used to collect and analyze data:

a. Drafted Introductions. Students produced two drafts of their article introductions: an initial draft (pre-intervention) and a final draft (post-intervention), both written individually. These drafts were assessed based on their inclusion and completeness of the three rhetorical moves of the CaRS model (Move 1: Establishing a Territory, Move 2: Establishing a Niche, and Move 3: Occupying the Niche).

b. Analytical Scoring Rubric. It was designed to evaluate each rhetorical move on a 3-point scale (0 = Move not present, 1 = Move present but incomplete or vague, and 2 = Move present and fully developed). Each draft received a total score ranging from 0 to 6. Inter-rater reliability was ensured through double scoring and consensus discussion.

Procedures

The research was conducted over four meetings, as detailed in Table 1.

Table 1. Research Procedure

Meeting	Activities		Step
9	At the end of class, the teacher asked students to bring a draft of their article introduction to the meeting 10	Both classes	Pre-test (First draft of Introduction)
10	All students were introduced to the rhetorical structure of research article introductions using the CaRS model.	Class B: Students brought their initial drafts and were instructed on how to use ChatGPT for rhetorical feedback.	AI-based feedback

	Then, students from both classes learnt from feedback to improve the introduction draft quality from the lens of CaRS model (Swales, 1990).	The researcher provided a prompt: "Anda adalah penulis artikel jurnal berpengalaman. Tolong periksa apakah artikel ini sudah memenuhi moves dari CaRS Model (Swales, 1990)? Jika belum, berikan saran perbaikannya." Students used ChatGPT to evaluate and revise their drafts accordingly.	
		Class C: Students exchanged drafts with peers, reviewed each other's use of the CaRS moves, and gave written feedback. The lecturer also gave verbal guidance.	Conventional peer feedback
11	Students rechecked the draft again and learnt from feedback to improve the introduction draft quality from the lens of CaRS model (Swales, 1990).	Class B: Students submitted their revised drafts and rechecked them using ChatGPT. Final revisions were made based on the second round of AI feedback.	AI-based feedback
		Class C: Students submitted revised drafts, received lecturer feedback, and completed final revisions.	Conventional peer feedback
12	All students submitted their final drafts, and their CaRS model fulfillment was scored by two independent raters. Students also filled out the open-ended perception survey.	Both classes	Post-test (Final draft of Introduction)

Data Analysis

The quantitative data were analyzed by comparing the pretest and posttest scores of both groups. Before running the main analysis, tests for normality and homogeneity of variance were carried out to ensure the data met the assumptions for parametric testing. To determine whether there was a significant difference in students' final draft scores between Class B (which received AI-generated feedback) and Class C (which received peer feedback), an independent-samples t-test was performed. All statistical analyses were conducted using SPSS version 24.

Ethical Considerations

Ethical approval was obtained from the univer ethics committee. Students were informed of the res objectives and their rights to anonymity and volu participation. The use of ChatGPT was transparent guided by educational purposes. No part of the w submitted for grading was generated by AI; the tool was solely for feedback and revision purposes. Confidential student responses and work was strictly maintained.

IV. RESULT

Test of Assumptions: Normality and Homogeneity

Before conducting statistical comparisons, assumption tests were performed to ensure the appropriateness of the chosen statistical analyses. The Levene's Test for homogeneity of variance (Table 2) indicated that the data met the requirement of equal variances across groups, with $p > .05$ in all approaches (e.g., based on mean: $F = .890$, $p = .351$). This suggests that the variance in CaRS scores was comparable between the experimental (AI-based) and control (peer-based) groups.

Furthermore, the Shapiro–Wilk test results (Table 3) confirmed that all datasets were normally distributed. The pretest and posttest scores in both groups yielded p-values above .05, indicating no significant deviation from normality (e.g., Pretest B EXP: $p = .079$; Posttest C CTRL: $p = .231$). These results justify the use of parametric tests in the subsequent analysis.

Table 2. Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Scores	Based on Mean	.890	1	39	.351
	Based on Median	.708	1	39	.405
	Based on Median and with adjusted df	.708	1	38.85	.405
	Based on trimmed mean	.931	1	39	.341

Table 3. Test of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Class	Statistic	df	Sig.	Statistic	df	Sig.
Scores	Pretest C (CTRL)	.214	21	.098	.886	21	.119
	Pretest B (EXP)	.275	20	.056	.864	20	.079
	Posttest C (CTRL)	.218	21	.171	.897	21	.231
	Posttest B (EXP)	.238	20	.104	.868	20	.091

a. Lilliefors Significance Correction

Comparative Effectiveness Between AI-Based and Peer-Based Feedback

While both feedback strategies significantly improved student performance, the independent-samples t-test (Table 4) was used to determine whether there was a significant difference in the effectiveness between the two groups at posttest. The result showed no significant difference in posttest scores between the experimental (AI-based) and control (peer-based) groups: $t(39) = -.482$, $p = .633$. This indicates that AI-based feedback was as effective as peer feedback in helping postgraduate students apply the CaRS model in academic writing. The mean difference of –0.16 (AI group slightly higher) was not statistically meaningful, suggesting pedagogical equivalence between both approaches in this context.

Table 4. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Scores	Equal variances assumed	2.04	.162	-.482	39	.633	-.160	.331	-.829	.510
	Equal variances not assumed			-.487	34.537	.630	-.160	.328	-.825	.506

Effect of AI-Based Feedback on CaRS Scores

The experimental group (Class B), which received AI-based feedback via ChatGPT, showed a substantial improvement in their CaRS model scores from pretest to posttest. As shown in Table 5, the mean pretest score was 2.75, while the mean posttest score rose to 4.35. The paired-samples t-test (Table 6) revealed that this difference was statistically significant: $t(19) = -6.532$, $p < .001$. This indicates that the use of ChatGPT feedback significantly enhanced students' ability to incorporate rhetorical moves in the introduction section of their research articles.

Effect of Peer-Based Feedback on CaRS Scores

Similarly, students in the control group (Class C), who received peer-based feedback, also demonstrated notable gains in performance. The mean score improved from 2.33 in the pretest to 4.19 in the posttest (Table 5). The paired-samples t-test in Table 6 reported a statistically significant improvement: $t(20) = -8.832$, $p < .001$. These results show that peer-based feedback was also highly effective in supporting students' mastery of the CaRS model structure.

Table 5. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pre_C_CTRL	2.33	21	.913	.199
	Class	4.19	21	1.250	.273
Pair 2	Pre_B_EXP	2.75	20	.786	.176
	Post_B_EXP	4.35	20	.813	.182

Table 6. Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
					95% Confidence Interval of the Difference				
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pre_C_CTRL - Post C_CTRL	-1.857	.964	.210	-2.296	-1.419	-8.832	20	.000
Pair 2	Pre_B_EXP - Post_B_EXP	-1.600	1.095	.245	-2.113	-1.087	-6.532	19	.000

Lastly, to synthesize the statistical findings and facilitate interpretation, Table 7 presents a concise summary of the key quantitative results. It compiles the mean differences, t-values, p-values, and interpretations from both within-group (pretest vs. posttest) and between-group (posttest) comparisons. This summary highlights the extent to which AI-based and peer-based feedback contributed to students' ability to apply the CaRS model, and whether one approach proved more effective than the other in supporting postgraduate academic writing performance.

Table 7. Summary of Quantitative Findings

Comparison	Mean Difference	t-value	p-value	Interpretation
Pre vs Post (AI Group)	1.6	–6.532	0	Significant improvement
Pre vs Post (Peer Group)	1.86	–8.832	0	Significant improvement
Post-AI vs Post-Peer (Between)	–0.16	–0.482	0.633	No significant difference

V. Discussion

The findings of this study reveal that both AI-generated and peer-based feedback significantly improved postgraduate students' ability to apply the CaRS model in writing research article introductions. The quantitative data showed meaningful gain scores in both groups, with the AI-based group improving from 2.75 to 4.35 and the peer-based group from 2.33 to 4.19. Although the peer-based group achieved slightly higher gains, the difference was not statistically significant. These results indicate that both types of feedback are comparably effective in enhancing students' understanding and application of rhetorical moves within the framework of genre-based academic writing.

This outcome supports the established notion in genre pedagogy that explicit instruction and focused feedback can improve students' rhetorical awareness and academic writing performance [8], [23]. The success of AI-generated feedback in this study reinforces recent scholarship suggesting that tools like ChatGPT can offer timely and structured responses that guide learners toward more cohesive and purpose-driven writing [10], [12]. When integrated with clear prompts that direct attention to rhetorical structures—as in the use of the CaRS model—ChatGPT appears to assist learners in identifying key moves such as establishing a territory, identifying a niche, and occupying the niche, thereby contributing to their genre competence.

In contrast to assumptions that AI tools provide only superficial language correction, this study confirms that with intentional design and pedagogical scaffolding, AI feedback can address structural and rhetorical features of academic texts. This aligns with Ozdere (2024), who noted that AI effectiveness is highly dependent on how learners are instructed to engage with the tool. Moreover, when learners are guided to interpret AI responses critically, the tool becomes more than an editor; it becomes a metacognitive support system for revision. These findings challenge the critique raised by Yoon et al. (2023), who warned about the generic nature of ChatGPT responses, by showing that genre-specific prompting can mitigate that limitation.

The improvement observed in the peer-based group affirms the value of collaborative revision and socially constructed feedback. Even in the absence of expert authority, peer reviewers offer alternative perspectives that promote self-reflection and engagement with genre conventions [21]. The near-equal effectiveness of peer and AI feedback highlights that both can serve as meaningful complements to teacher feedback, especially in writing-intensive courses where instructor input is limited. In line with previous findings from Bian (2023) and Wei and Liu (2024), peer-based feedback also facilitates dialogic interaction and mutual learning, which likely contributed to the substantial gains achieved by the control group.

Beyond confirming the effectiveness of these two feedback types, the present study fills a notable research gap by directly comparing AI-generated and peer-based feedback within a genre-based writing context focused on the CaRS model. Most previous studies emphasized AI feedback in general writing improvement or grammar correction, often neglecting the structural and rhetorical dimensions of academic writing. By contrast, this study focuses on how feedback, regardless of source, can influence students' mastery of academic discourse moves. The results answer the call for more targeted and genre-sensitive evaluations of feedback tools in EFL and postgraduate contexts [13], [14].

Importantly, this study is situated within the Indonesian Islamic university context, where postgraduate students are required to produce publishable research outputs, yet often lack access to sustained academic writing support. The pedagogical implications are substantial: integrating

tools like ChatGPT into academic writing instruction can democratize access to quality feedback, especially in resource-limited institutions. However, this does not negate the importance of human interaction. Instead, the findings suggest that AI and peer feedback can function as complementary components of a feedback-rich writing environment.

The results also imply that feedback effectiveness is not determined solely by the source—human or AI—but by the clarity of feedback criteria, the learners' ability to interpret and apply comments, and the instructional conditions under which feedback is integrated. Thus, writing instructors are encouraged to cultivate students' feedback literacy while designing instructional interventions that harness the strengths of both AI technologies and human collaboration. Future research may build on these findings by exploring the emotional and cognitive dimensions of student engagement with feedback, as well as extending the analysis to other rhetorical sections beyond introductions.

VI. Conclusion

This study set out to examine whether AI-generated feedback, when compared to peer-based feedback, could effectively support postgraduate students in applying the Create-a-Research-Space (CaRS) model in writing research article introductions. Drawing on a quasi-experimental design, the findings demonstrate that both feedback types led to significant improvements in students' ability to construct coherent and rhetorically sound introductions. No statistically significant difference was found between the two groups, suggesting that AI-based and peer-based feedback are pedagogically comparable in supporting genre-based academic writing performance at the postgraduate level.

These findings directly answer the research problem by affirming that ChatGPT, when guided by structured prompts and embedded within genre pedagogy, can function as a valid alternative to traditional peer feedback. In doing so, the study not only confirms the instructional value of both feedback modes but also highlights their potential to complement one another in supporting academic writing development. This becomes particularly relevant in educational contexts where access to personalized instruction is constrained, such as in large postgraduate classes or under-resourced institutions.

Despite its contributions, this study has several limitations. The sample was relatively small and drawn from a single institution, limiting generalizability. The focus was restricted to the introduction section using the CaRS model, excluding other parts of academic writing. Additionally, students' perceptions and emotional responses to feedback were not explored. Future studies should involve larger, more diverse samples and extend the analysis to other rhetorical sections. Research that examines students' cognitive and affective engagement with AI and peer feedback is also recommended to gain richer insights.

Pedagogically, this study suggests that both AI and peer feedback can be integrated effectively into genre-based instruction. Educators may adopt hybrid feedback approaches to optimize both efficiency and depth. AI tools like ChatGPT, when used with clear prompts and critical engagement, offer scalable support for academic writing development, particularly in resource-limited contexts.

References

[1] M. Li, "Non-native English-speaking (NNES) students' English academic writing experiences in higher education: A meta-ethnographic qualitative synthesis," *J. English Acad. Purp.*, vol. 71, p. 101430, 2024, doi: https://doi.org/10.1016/j.jeap.2024.101430.

[2] E. Nnamdi, "The Influence Of International Rankings On Higher Education Reforms And Institutional Strategies," *Int. J. Innov. Soc. Sci. Humanit. Res.*, vol. 13, no. 1, pp. 273–280, 2025, doi: 10.5281/zenodo.14903000.

[3] F. G. Talaue and R. B. Hendijani, "Holistic Pedagogical Support to Address Postgraduate Students' Challenges in Academic Publishing: The Case of a Business School in Indonesia," *Asia-Pacific Educ. Res.*, vol. 34, no. 2, pp. 565–573, 2025, doi: 10.1007/s40299-024-00878-7.

[4] R. Ismail and L. Marlina, "Rhetorical Moves in Indonesian Students' Thesis Introductions: A Genre-Based Analysis," *Indones. J. Appl. Linguist.*, vol. 13, no. 1, pp. 143–153, 2023, [Online]. Available: https://ejournal.upi.edu/index.php/IJAL

[5] T. N. Fitria and A. Syamsudin, "Students' Difficulties in Writing Research Article Introduction Based on CARS Model," *J. Basis*, vol. 8, no. 1, pp. 115–130, 2021.

[6] B. Yasin, H. Qamariah, B. Aceh, B. Aceh, and B. Aceh, "The Application of Swales ' Model in Writing a Research Article Introduction," vol. 1, no. 1, pp. 29–41, 2014.

[7] D. Suryani and Z. Amri, "Effect of genre-based approach in teaching research article introduction," *J. English Lang. Teach.*, 2023.

[8] N. A. Putri and E. Kurniawan, "Applying CaRS Model in Writing: A Case of Indonesian EFL Graduate Students," *Stud. English Lang. Educ.*, vol. 9, no. 3, pp. 874–887, 2022.

[9] G. Dizon, J. Gold, and R. Barnes, "ChatGPT for self-regulated language learning: University English as a foreign language students' practices and perceptions," *Digit. Appl. Linguist.*, vol. 3, no. 1, p. 102510, 2025, doi: https://doi.org/10.29140/dal.v3.102510.

[10] Y. Fang, Y. Tan, and C. Zuo, "AI-Generated vs. Peer Feedback in ESL Writing: Effects on Writing Skill, Self-Efficacy, and Enjoyment," 2025. [Online]. Available: https://ssrn.com/abstract=5115438

[11] H. H. Nguyen, "ChatGPT-assisted language learning : Effects on Vietnamese English majors ' writing skills and motivation," *JALT CALL J.*, vol. 21, no. 2, pp. 1–25, 2025.

[12] J. Escalante, "ChatGPT and Writing Feedback: An Empirical Review," *Educ. Technol. Res. Dev.*, vol. 71, no. 4, pp. 765–780, 2023.

[13] S. K. Banihashem, "Peer-generated vs AI-generated Feedback: Impacts on Essay Writing," *Asia Pacific J. Educ.*, vol. 44, no. 1, pp. 101–115, 2024.

[14] E. Chamoun and A. Vlachos, "Automated Focused Feedback Generation for Scientific Writing Assistance," *arXiv*, 2024, [Online]. Available: https://arxiv.org/abs/2405.20477

[15] E. Suryani and S. Amri, "Enhancing Rhetorical Awareness through Genre-Based Academic Writing Instruction," *J. Lang. Educ.*, vol. 9, no. 1, pp. 34–45, 2023.

[16] L. Bian, "Peer feedback and Chinese medical students' English academic writing development: a longitudinal intervention study," *BMC Med. Educ.*, vol. 23, no. 2, pp. 103–120, 2023.

[17] Y. Wei and D. Liu, "Incorporating peer feedback in academic writing: a systematic review of benefits and challenges," *Front. Psychol.*, vol. 15, no. 1, pp. 77–90, 2024, doi: https://doi.org/10.3389/fpsyg.2024.1506725.

[18] S. Yoon, E. Miszoglad, and L. R. Pierce, "Evaluation of ChatGPT feedback on ELL writers' coherence and cohesion," *J. Second Lang. Writ.*, 2023.

[19] M. Ozdere, "Prompt-Based Use of ChatGPT in EFL Writing: Effects on Structure and Motivation," *Comput. Assist. Lang. Learn.*, vol. 37, no. 2, pp. 111–130, 2024.

[20] Y. Qian, J. Wang, and Y. Cai, "Revolutionizing educational landscapes: A systematic review of Metaverse applications, paradigms and emerging technologies," *Cogent Educ.*, vol. 10, no. 2, pp. 1–18, 2023, doi: 10.1080/2331186X.2023.2264006.

[21] E. Jacobsen and S. Weber, "Human vs. AI Reviewers in Writing Assessment: A Prompted Comparison," *ELT J.*, vol. 77, no. 1, pp. 87–101, 2023.

[22] J. Steiss, T. Tate, S. Graham, J. Cruz, and M. Hebert, "Comparing the quality of human and ChatGPT feedback of students' writing," *Learn. Instr.*, 2024.

[23] D. Suryani and Z. Amri, "The Effect of Genre-Based Approach in Teaching Research Article Introduction," *J. English Lang. Teach.*, vol. 12, no. 2, pp. 120–129, 2023.

Reviewer Letter

This manuscript presents a timely and relevant study comparing AI-generated and peer-based feedback within the CaRS model framework, focusing on postgraduate EFL academic writing. The work is original in its contextual focus and in addressing an underexplored gap, although the contribution is incremental rather than groundbreaking. The findings are significant, particularly for resource-limited contexts, as they suggest that AI-generated feedback can be as effective as peer feedback when guided by structured prompts. The research design is appropriate, employing a quasi-experimental pretest–posttest format with validated rubrics, inter-rater reliability, and appropriate statistical analyses. However, the small sample size, lack of randomization, and the narrow focus on introduction sections limit the robustness and generalizability of the findings.

The manuscript is generally well-written and well-structured, with clear use of tables and consistent terminology. Nonetheless, some sections are repetitive and wordy, and the presentation would benefit from stylistic tightening, stronger integration of student perception data, and the inclusion of visual aids (e.g., a figure of the CaRS model or research procedure).

Suggested Revisions

1. Clarity and Style: Shorten and tighten long sentences in the *Introduction* and *Discussion*; reduce repetition of the research gap and findings.
2. Presentation: Add at least one visual aid (e.g., flow diagram of research procedure or schematic of the CaRS model); integrate perception survey data more fully (thematic categories or sample quotes).
3. Methodology and Scope: Clarify the limitations of non-random group assignment (intact classes); acknowledge the narrow scope (introductions only) and suggest how future work could extend to other sections.
4. Discussion and Implications: Streamline the discussion to highlight the unique contribution (AI vs. peer feedback in a genre-based framework) rather than reiterating prior findings; expand pedagogical implications by outlining how hybrid models (AI + peer feedback) could be applied in practice.
5. References: Review the literature section to reduce redundancy; connect student perception insights more explicitly with qualitative studies on learner engagement with feedback.

Finally, the reference list is comprehensive and up to date, but the literature review could be streamlined. With the suggested revisions, this paper has strong potential to make a valuable impact on both research and teaching practice. I encourage the authors to refine the manuscript accordingly and look forward to the revised version.

Recommendation: Minor Revisions

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Review: Comparing AI-based and Peer-based Feedback in Teaching the CaRS Model: A Quasi-Experimental Study on Postgraduate Academic Writing

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2 messages

Ms. Alice Loh <alice.loh@ejournal.net> Tue, Aug 26, 2025 at 10:30 AM
To: Wahyuni Sri <wahyunis@edu.uir.ac.id>

Dear Wahyuni Sri,

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