



Enhancing academic writing through collaborative discussions: a mixed-methods study with university EFL students

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Abstract

This mixed-methods study examines how collaborative discussions enhance academic writing development among university EFL students. A total of 147 university students participated in pre-test and post-test assessments to measure their writing performance before and after engaging in group discussions. The pre-test results revealed that students' writing skills were rated between "fair" and "good," with a mean score of 2.41 and a high degree of variability ($SD = 0.985$). After the intervention, the post-test showed a significant improvement, with the mean score rising to 3.40, indicating writing abilities between "good" and "very good." Paired-samples t-test results indicated statistically significant improvements in argumentation, coherence, and structure after the intervention ($p < .001$). The standard deviation decreased to 0.657, suggesting a more consistent performance among students. Qualitative findings revealed that collaborative idea generation, peer feedback, and exposure to diverse perspectives played a significant role in improving students' argumentation, coherence, and structural organization in academic writing. Group discussions also increased students' confidence and motivation, although some participants reported time-management challenges, suggesting the need for more structured facilitation.

Keywords: Academic writing development, Peer feedback, Mixed-methods research, EFL students, Higher education writing

1. Introduction

1.1. Background to the study

Academic writing skills are a fundamental component of education and research, serving as the cornerstone of knowledge dissemination, effective communication, and intellectual development. These skills are not confined to academia alone but extend their influence into various professional spheres. In the realm of education, academic writing skills are indispensable for students seeking to excel in their studies. The ability to construct coherent and well-structured essays, reports, and research papers is a hallmark of academic prowess. McWhorter (2018) noted that students who develop strong writing skills are more likely to achieve higher grades and better academic outcomes. Such skills enable students to articulate their ideas effectively, making their arguments more persuasive and their academic work more compelling. Academic writing is the medium through which knowledge is disseminated and research is advanced. Scholars and researchers rely on written publications to share their findings and engage in scholarly discourse. Academic writing serves as a bridge between the individual research endeavour and the collective body of knowledge, allowing others to build upon existing research. Booth, Colomb, and Williams (2008) highlight the role of academic writing in documenting methodologies, results, and conclusions, facilitating the replication of experiments and the expansion of scientific understanding. One of the most crucial functions of academic writing is its contribution to the development of critical thinking and analytical skills. Paul and Elder (2006) emphasize

that the process of academic writing requires writers to evaluate evidence, make reasoned arguments, and engage with complex ideas. Through the act of constructing written arguments, individuals must critically assess the strength of their claims and the quality of their supporting evidence. This intellectual rigor not only enhances academic work but also cultivates essential life skills.

In recent years, academic writing instruction has also been influenced by the rapid development of digital technologies and artificial intelligence (AI)-supported writing tools. AI-powered applications such as automated grammar checkers, writing assistants, and generative language models increasingly provide students with instant feedback on language accuracy, coherence, and organization (Ranalli, 2023) [24]. While these technologies offer valuable support for the writing process, many scholars argue that human interaction and collaborative learning remain essential for developing deeper rhetorical awareness, critical thinking, and argumentative skills in academic writing. In this context, collaborative discussions continue to play a vital pedagogical role by enabling students to exchange ideas, negotiate meaning, and refine their arguments through peer interaction.

1.2. Statement of the research problem

Despite the importance of academic writing in higher education, many students continue to struggle with the complexity and structure required for successful written communication. Traditional approaches to teaching academic writing often result in passive learning, with limited

opportunities for student interaction and engagement. As a result, students may find it difficult to improve their writing skills, particularly in areas such as idea development, organization, and clarity of expression.

This research seeks to address the problem by investigating whether the collaborative discussions can enhance the teaching and learning of academic writing. Specifically, the study aims to explore how collaborative discussions among students can foster critical thinking, peer feedback, and shared learning experiences, thereby contributing to improvements in academic writing performance. The problem lies in understanding how group discussions can be effectively integrated into academic writing instruction to promote active learning and skill development.

1.3. Purpose of the study

The purpose of this study is to examine how collaborative discussions influence the development of academic writing among university EFL students. Using a mixed-methods design, the study explores both the measurable impact of collaborative discussions on students' writing performance and students' perceptions of discussion-based writing instruction. Group discussions, which promote collaborative learning and peer feedback, are believed to encourage active participation and critical thinking among students (Brown & Larson, 2016). By integrating group discussions into the academic writing process, this study aims to determine how these interactions can enhance students' ability to organize ideas, develop arguments, and express themselves more clearly in writing. Furthermore, the study seeks to explore the specific elements of group discussions, such as peer collaboration and shared learning experiences—that contribute to students' improved writing performance (Smith & MacGregor, 2017). The ultimate goal is to provide insights that can inform instructional practices in teaching academic writing and offer practical strategies for enhancing student engagement and learning outcomes through group-based activities.

1.4. Research questions or hypotheses

Based on the proposed purpose of the study, the following research questions have been formulated.

- To what extent do collaborative discussions improve academic writing performance among university EFL students?
- What aspects of collaborative discussions contribute most to students' academic writing development?
- How do students perceive the role of collaborative discussions in supporting their writing development?

1.5. Significance of the study

This study is significant because it contributes to both academic research and pedagogical practice in academic writing instruction. By examining the role of collaborative discussions in academic writing development, this study demonstrates how collaborative learning environments can support students' writing improvement.

To begin with, this study adds to the literature concerning the engagement of students with peers and group work in the process of academic writing. It elevates the significance of social learning theory which postulates that students learn better when they communicate and provide and receive feedback (Vygotsky, 1978) ^[30]. Knowing how group discussions operate can help teachers create organizational arrangements and instructional methods of teaching writing that will be more interactive and engaging.

Secondly, the study provides practical implications for the educators. A significant number of learners experience problems in mastering the skills of writing for academic purposes, especially when it comes to contemplation of the topic, threading ideas, building an argument, and providing evidence. By showing how group discussions can be used in this regard, this study argues for a shift from the conventional approach to teacher-led instruction to more of a student-dependent and participatory strategy. This can serve to enhance students' confidence in academic writing and encourage creativity, both of which are very much needed in academic environments.

Finally, yet importantly, curriculum designers and educational policy makers will appreciate the implications of your findings and their relevance for improving writing curricula through collaborative learning strategies. The findings will hopefully support proposals for the formal adoption of organizational group conversations as part of academic writing courses which will enable institutions to optimally prepare their students for academic and professional contexts.

This research contributes to the improvement of instructional practices in academic writing. Some specific teaching methods that will improve students' writing abilities and minimize specific problems that students encounter in the process of learning to write will be welcomed.

2. Literature review

2.1. Theoretical perspectives on collaborative discussions in academic writing instruction

Several theoretical frameworks inform the use of group discussions in writing instruction, providing insights into how collaborative learning environments can enhance writing skills.

Social constructivism

Social constructivism posits that knowledge is constructed through social interaction and collaboration. In the context of writing instruction, group discussions allow students to negotiate meaning, share ideas, and co-construct knowledge about writing (Vygotsky, 1978) ^[30]. By engaging in collaborative writing activities, students draw on their collective experiences and perspectives to develop a deeper understanding of writing concepts and strategies (Wells, 1999) ^[32].

Community of practice

The concept of communities of practice emphasizes the role of social participation and shared learning within a community of learners. In writing instruction, group discussions create

opportunities for students to become active members of a writing community, where they engage in collaborative problem-solving, receive feedback, and share expertise (Lave & Wenger, 1991) ^[12]. Through participation in group discussions, students develop a sense of belonging and ownership over their writing processes (Palmer, 2007) ^[22].

Dialogic pedagogy

Dialogic pedagogy emphasizes the importance of dialogue and discussion in the teaching and learning process. In writing instruction, group discussions foster dialogue among students, encouraging them to articulate their ideas, ask questions, and engage in critical reflection (Wegerif, 2007) ^[31]. By creating spaces for dialogue, instructors can facilitate meaningful interactions that promote deeper understanding and metacognitive awareness of writing practices (Mercer, 2000) ^[21].

Sociocultural theory

Sociocultural theory highlights the role of cultural and social contexts in shaping learning experiences. In the context of writing instruction, group discussions provide opportunities for students to engage with diverse perspectives, cultural norms, and writing conventions (Bakhtin, 1981) ^[1]. Through collaborative interactions, students negotiate meaning and develop rhetorical awareness, recognizing the situated nature of writing within specific social and cultural contexts (Prior, 1998) ^[23].

By drawing on these theoretical frameworks, instructors can design writing instruction that emphasizes collaboration, dialogue, and social interaction, thereby enriching students' learning experiences and fostering the development of writing skills in diverse contexts.

2.2. The role of peer feedback and collaboration in writing improvement

Peer feedback and collaboration are integral components of writing improvement, offering writers diverse perspectives, constructive criticism, and opportunities for revision (Cho & MacArthur, 2010) ^[5]. Through peer feedback, writers gain insights into how their writing is perceived by different audiences, broadening their understanding of effective communication strategies. Constructive criticism from peers helps writers identify strengths and weaknesses in their writing, refine arguments, and address grammatical or structural issues (Lopatovska & Chakraborty, 2016) ^[16]. Engaging in collaborative revision processes with peers promotes active engagement with writing, leading to substantive revisions and improvements in writing quality over time (Berg, 1999) ^[2]. Additionally, peer feedback fosters increased engagement and motivation among writers, as they feel a sense of ownership and accountability for their work (Tsui & Ng, 2000) ^[27]. Furthermore, peer feedback facilitates social learning and knowledge sharing, allowing writers to exchange ideas, strategies, and insights with one another (Harris, 1992) ^[7]. It also promotes cultural sensitivity and awareness by encouraging consideration of cultural differences in

communication styles and writing conventions (Matsuda & Silva, 2005) ^[19]. In summary, peer feedback and collaboration play pivotal roles in enhancing writing skills, offering writers valuable opportunities for growth and development.

2.3. Benefits of group discussions in academic writing

Group discussions have become a valuable pedagogical tool in teaching academic writing, offering multiple benefits to students, including the enhancement of critical thinking, improved writing proficiency, and fostering collaboration. Below is a more detailed exploration of the key benefits of incorporating group discussions in academic writing classes, supported by recent studies and updated references.

2.3.1. Facilitation of social learning and cognitive development

Group discussions are deeply rooted in the social constructivist theory proposed by Vygotsky (1978) ^[30], which emphasizes that learning occurs in social contexts and through interactions with others. Collaborative writing has been widely recognized as an effective strategy for promoting interaction and language development in second language writing classrooms (Storch, 2019) ^[25]. Through group discussions, students are exposed to different viewpoints and writing styles, which fosters cognitive development and helps them refine their understanding of writing concepts. By participating in these interactions, learners can articulate their ideas more clearly, receive constructive feedback, and refine their drafts based on peer input, leading to an improvement in their overall writing quality.

As noted by Mercer and Howe (2012) ^[20], dialogue between learners in collaborative settings promotes the co-construction of knowledge. In the context of academic writing, this means that students develop their writing skills not in isolation but through negotiation and shared understanding, which can help address individual gaps in knowledge and writing technique.

2.3.2. Development of critical thinking skills

Critical thinking is a cornerstone of academic writing, and group discussions have been proven to enhance this skill. During group discussions, students are encouraged to analyze, critique, and debate various arguments, which allows them to think more critically about their own and others' writing. Gokhale (1995) ^[9] found that collaborative learning fosters critical thinking by requiring students to engage in dialogue, challenge assumptions and defend their ideas.

A more recent study by Zhou (2018) ^[36] further confirmed that group discussions, when facilitated properly, result in higher levels of critical analysis and synthesis in student writing. The interactive nature of these discussions pushes students to not only reflect on their own writing but also to consider alternative perspectives.

2.3.3. Enhancing coherence and cohesion in writing

One of the key challenges students face in academic writing is achieving coherence and cohesion. Group discussions provide a platform for students to share their writing, receive feedback,

and improve the structure and flow of their arguments. According to Liu and Hansen (2021) ^[17], peer interaction and collaboration help students become more aware of the logical structure of their essays, leading to better-organized papers. Students often struggle with transitioning between ideas or maintaining thematic unity throughout their essays. By engaging in group discussions, they can receive immediate feedback on how to improve their cohesion and coherence. Research conducted by Mackey and Gass (2020) ^[18] emphasizes that peer feedback obtained through group work not only strengthens writing coherence but also encourages learners to focus more on the clarity and precision of their language.

2.3.4. Promoting peer learning and feedback

Group discussions also promote peer learning, which has been shown to be effective in improving students' writing performance. Bruffee (1999) ^[4] was one of the earliest proponents of collaborative learning, highlighting that when students work together, they can challenge and support each other understands. This process of giving and receiving feedback in a group setting allows students to develop critical evaluation skills and become more self-aware of their own writing process.

A recent meta-analysis by Hattie and Timperley (2007) ^[8] demonstrated that feedback is one of the most significant factors influencing student achievement. In group discussions, students benefit from multiple sources of feedback, allowing them to view their writing from different angles and make more informed revisions. Peer feedback also reduces the anxiety associated with writing by creating a supportive environment where students feel comfortable sharing their work.

2.3.5. Fostering communication skills and reducing writing anxiety

Group discussions create a collaborative and non-threatening environment that encourages open communication. This has a two-fold effect on students: it improves their communication skills and reduces writing anxiety. Leki (1991) ^[13] emphasized that students who engage in peer discussions feel less isolated and more confident in their writing abilities. They become more comfortable with the process of drafting, revising, and receiving feedback, which ultimately leads to a more positive attitude toward writing tasks.

According to Yu and Lee (2016) ^[29], peer interaction in collaborative writing environments supports the development of both linguistic competence and interpersonal communication skills. Group discussions also help students develop soft skills such as negotiation, active listening, and empathy, all of which are essential for both academic success and professional development. Writing, traditionally seen as a solitary activity, becomes more dynamic and engaging through group interactions.

2.3.6. Building a community of learners

Another significant benefit of group discussions is that they help build a community of learners, which is particularly

important in the academic writing classroom. Writing can be a daunting task for many students, and by working in groups, they develop a sense of shared purpose and belonging. This collaborative community fosters a sense of accountability, where students feel more motivated to contribute to discussions and complete writing tasks.

Creswell and Creswell (2018) ^[6] noted that students in collaborative learning environments tend to form stronger academic relationships, which can lead to better learning outcomes. In writing classes, group discussions create opportunities for students to support each other's learning, further enhancing their writing skills and overall academic performance.

In conclusion, incorporating group discussions into academic writing instruction offers several key benefits. They promote critical thinking, enhance coherence and cohesion in writing, and provide a platform for peer learning and feedback. Additionally, group discussions foster communication skills, reduce writing anxiety, and build a supportive community of learners. By creating a more interactive and collaborative writing environment, educators can help students improve both their writing abilities and their confidence in tackling academic writing tasks.

2.4. Research gap

Although previous research has demonstrated the benefits of collaborative writing and peer feedback in second language writing classrooms, relatively few studies have examined how structured collaborative discussions influence specific components of academic writing development, such as argumentation, coherence, and structural organization. Moreover, empirical studies using mixed methods designs in university EFL contexts remain limited. To address this gap, the present study adopts a mixed-methods approach to examine the impact of collaborative discussions on academic writing development among university EFL students. In addition, relatively few studies have examined how collaborative discussions influence multiple dimensions of academic writing simultaneously, including argumentation, coherence, and structural organization in university EFL contexts.

3. Methodology

3.1. Research design

This study employed a mixed-methods research design, combining quantitative and qualitative data to provide a comprehensive understanding of how collaborative discussions influence academic writing development among university EFL students. This approach is suitable because it allows for both the measurement of improvements in students' academic writing (quantitative data) and the exploration of students' experiences and perceptions of group discussions (qualitative data). The design consists of two distinct phases: one focused on collecting quantitative data through pre-tests and post-tests, and the other gathering qualitative insights from focus groups. This combination of methods provides a well-rounded perspective, addressing both the measurable outcomes and the subjective experiences of participants.

The quantitative component of the research aimed to measure the impact of group discussions on specific aspects of academic writing, such as critical thinking, coherence, cohesion, and language accuracy. To achieve this, pre-test and post-test assessments were administered to students before and after the collaborative discussion-based instruction (group discussions). These tests were evaluated using standardized rubrics that focus on various aspects of academic writing, including clarity, argument structure, and writing mechanics. The data collected would then be analyzed using inferential statistics, such as paired t-tests or ANOVA, to determine whether any statistically significant improvements in writing skills occurred. The use of statistical software like SPSS would be instrumental in conducting this analysis.

The qualitative component explored students' perceptions, experiences, and attitudes toward group discussions and how these interactions influenced their academic writing skills. To gather in-depth insights, focus group discussions were conducted with a subset of the students. These sessions provided detailed narratives about the students' collaborative experiences, challenges, and perceived benefits of group work in writing. A thematic analysis of this data revealed recurring themes related to collaboration, peer learning, and the development of critical thinking skills. The qualitative component would thus complement the quantitative results by providing a richer, more nuanced understanding of how group discussions impact writing development.

3.2. Participants and procedures

Participants of the study involve selecting students enrolled in academic writing courses at the university level. To ensure a diverse representation of participants, stratified random sampling was used, selecting students from different academic performance levels, and language proficiencies. For the quantitative data collection, a larger sample size of 147 students was invited to ensure statistical reliability. The qualitative component selected 25 students for in-depth focus group discussions.

The procedure involved implementing collaborative discussion activities over an 11-week semester. Students completed a pre-test at the beginning of the course and a post-test at the end to measure improvements in academic writing. The intervention could span a full semester of 11 weeks, with pre-tests administered at the start and post-tests at the end, to measure the development of writing skills over time.

Because the study adopted a one-group pretest–posttest design, improvements in students' writing performance were examined by comparing scores before and after the collaborative discussion intervention. The consistent use of assessment rubrics for evaluating writing tests, as well as inter-rater reliability checks for qualitative data analysis, would improve the reliability of the findings. Furthermore, triangulation, comparing data from both quantitative and qualitative sources would strengthen the validity of the research by providing multiple perspectives on the outcomes.

In conclusion, this mixed-methods research design provides a comprehensive framework for investigating the benefits of

group discussions in academic writing instruction. By incorporating both quantitative assessments and qualitative insights, the design captures a wide range of outcomes, from measurable improvements in writing skills to students' subjective experiences. The combination of these methods offers a robust way to explore the effectiveness of group discussions and their potential as a pedagogical strategy in academic writing classrooms.

4. Findings

4.1. To what extent do collaborative discussions enhance academic writing among university EFL students?

4.1.1. Quantitative findings

Table 1 displays the results of pre-test and post-test. The pre-test involved 147 students, with scores ranging from 1 to 4. The minimum score of 1 represents "poor," while the maximum score of 4 indicates "very good." The mean score for the pre-test was 2.41, which falls between "fair" (2) and "good" (3), but leans more toward "fair." This suggests that, on average, students' writing skills were rated slightly above "fair" before any intervention or teaching method was applied. The standard deviation of 0.985 shows a moderate degree of variability in the students' performance. Some students performed significantly better or worse than others on the pre-test, indicating a wide range of writing abilities among the group before the intervention.

The post-test, conducted with the same 147 students, showed an improvement in writing skills. The lowest score in the post-test was 2 ("fair"), and the highest score was 4 ("very good"). The mean score rose to 3.40, indicating that after the intervention, most students' writing abilities were between "good" and "very good." This increase in the mean score suggests a significant improvement in students' writing skills because of the teaching method or intervention. The standard deviation decreased to 0.657, indicating that the post-test scores were more consistent, with less variability among students. This means that the students' writing performance became uniform, with fewer students performing at the extremes of the scoring range.

Overall, the results show a clear improvement in students' writing abilities from the pre-test to the post-test. The average score increased from closer to "fair" to between "good" and "very good," demonstrating the positive impact of the intervention. The decrease in the standard deviation further supports this improvement, suggesting that the students' writing performance became more consistent, and fewer students were struggling or excelling to extreme levels. This indicates that the intervention not only helped raise the overall writing quality but also contributed to reducing disparities in student performance.

Table 1: Descriptive statistics

Test	N	Min	Max	Mean	SD
Pre-test	147	1	4	2.41	0.985
Post-test	147	2	4	3.40	.657

4.1.2. Qualitative findings

The focus group discussions revealed that collaborative idea generation was one of the key benefits of group discussions in enhancing students' academic writing. Many students emphasized that discussing writing topics with peers allowed them to explore ideas they hadn't previously considered. One participant stated, *"I often get stuck with my ideas, but during group discussions, I get inspired by others' perspectives, and that helps me develop stronger arguments in my essays."* This suggests that group discussions encouraged a dynamic exchange of ideas, leading to richer content in students' writing. Another significant finding was the value of peer feedback and error correction. Several students appreciated that their peers could identify weaknesses in their writing that they themselves had missed. One student shared, *"Sometimes, I overlook simple mistakes or weak arguments, but my group members point them out and offer suggestions on how to improve. It's like having multiple pairs of eyes on my work."* This illustrates how the group discussions created an environment where students could receive constructive criticism, which helped them revise and improve their writing.

Many students also noted improvements in the structure and organization of their essays because of group discussions. They explained that listening to how their peers structured their writing provided insights into better organizing their own work. One participant remarked, *"After discussing with my group, I realized that my writing needed a clearer structure. They helped me see how to organize my paragraphs more logically."* This highlights the role of group discussions in helping students develop more coherent and logically organized essays, which are essential in academic writing.

In addition to the tangible improvements in writing skills, the discussions also had a positive impact on students' confidence and motivation. Many participants reported feeling more assured about their writing abilities after receiving feedback from their peers. *"Before, I wasn't sure if my ideas were good enough, but after getting feedback in my group, I feel more confident about my writing,"* said one student. This indicates that group discussions not only improved students' writing but also boosted their self-confidence, motivating them to put more effort into their work.

Students also appreciated the exposure to diverse perspectives during the discussions. Hearing how others approached the same writing topics in different ways helped them broaden their understanding and incorporate more sophisticated ideas into their writing. One participant explained, *"It's interesting to see how others approach the same topic differently. It opens my mind to new ways of thinking and writing."* This suggests that group discussions provided a platform for students to expand their thinking and enrich the complexity of their written work.

However, some students noted challenges with time management during group discussions. A few participants mentioned that discussions occasionally became too lengthy or drifted off-topic, reducing the effectiveness of the sessions. One student admitted, *"Sometimes, we spend too much time talking about unrelated things, and by the end, we don't have*

enough time to focus on improving our writing." This reflects a need for better facilitation of the discussions to ensure they remain focused and productive.

In conclusion, the focus group discussions highlighted the significant benefits of group discussions in improving students' academic writing skills. Through collaborative idea generation, peer feedback, and exposure to diverse perspectives, students were able to enhance both the content and organization of their writing. Additionally, the discussions helped boost students' confidence and motivation. However, the challenge of time management points to the importance of maintaining focus during group sessions to maximize their effectiveness.

4.2. What aspects of group discussions contribute most to enhancing the teaching and learning of academic writing?

This section encompasses the analysis of pre and post-test data in relation to the success in academic writing in terms of all its major areas: argumentation, coherence and structure. The first step requires obtaining all pre and post scores and taking a general picture whether there is at least a slight statistically significant improvement in any areas. It will be necessary to conduct appropriate statistical tests (for example, a paired t-test) to determine whether group discussions had such positive influence. Where the scores demonstrate some improvement, it implies that group discussions were effective in improving the writing skills performance of students.

The Descriptive Statistics (table 2) provides valuable insights into how participants' academic writing improved across three key criteria—Argumentation, Coherence, and Structure—as a result of group discussions. By comparing pre-test and post-test scores, we can observe notable progress in each of these areas, with varying degrees of improvement among participants.

Table 2: Descriptive statistics

	N	Minimum	Maximum	Mean	Std. deviation
Argumentation pre-test	147	1	2	1.55	.499
Coherence pre-test	147	1	4	1.65	.571
Structure pre-test	147	1	4	2.08	1.003
Argumentation post-test	147	2	5	3.70	.590
Coherence post-test	147	3	5	3.65	.494
Structure post-test	147	1	5	2.50	.954
Valid N (listwise)	147				

The Paired Samples Test (table 3) provides clear evidence of the impact of group discussions on participants' academic writing across three key criteria: Argumentation, Coherence, and Structure. By comparing pre-test and post-test scores, the test reveals statistically significant improvements in all areas, with varying degrees of change.

For Argumentation, the mean difference between pre-test and post-test scores was -2.150, indicating a substantial improvement in participants' ability to construct and support arguments in their writing. The t-value of -34.217 and a highly significant p-value of .000 confirm that this improvement is

statistically significant. The 95% confidence interval, ranging from -2.274 to -2.025, further supports the reliability of this result. Overall, these findings suggest that group discussions were particularly effective in enhancing the participants' argumentation skills.

Similarly, Coherence showed a significant improvement, with a mean difference of -2.000 between the pre-test and post-test scores. The t-value of -32.356 and a *p*-value of .000 demonstrate that the change in coherence is statistically significant. The confidence interval for the difference is between -2.122 and -1.878, indicating a consistent positive effect. This suggests that group discussions helped participants improve the logical flow and clarity of their writing, making their ideas more coherent and better organized.

In contrast, the improvement in Structure was more modest, with a mean difference of -0.422. While the t-value of -4.633 is lower than for argumentation and coherence, the *p*-value remains highly significant at .000. The confidence interval ranges from -0.602 to -0.242, indicating that although the progress in structure was statistically significant, it was less

pronounced. This suggests that while participants made moderate gains in organizing their essays, the effect of group discussions on structure was less impactful compared to argumentation and coherence.

In summary, the paired samples test highlights that group discussions led to significant improvements in argumentation, coherence, and, to a lesser extent, structure. The most substantial gains were observed in argumentation and coherence, where participants showed marked progress in constructing well-supported arguments and enhancing the clarity of their ideas. Structure also improved, though the change was less dramatic, indicating that more support may be needed to help students improve the organization of their writing.

The paired-samples *t*-test results indicate statistically significant improvements in argumentation, coherence, and structure after the collaborative discussion intervention (*p* < .001), suggesting that collaborative discussions had a meaningful impact on students' academic writing performance.

Table 3: Paired samples test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Dev.	Std. error mean	95% Confidence interval of the difference				
					Lower	Upper			
Pair 1	Argumentation1 - Argumentation2	-2.150	.762	.063	-2.274	-2.025	-34.22	146	.000
Pair 2	Coherence1 - Coherence2	-2.000	.749	.062	-2.122	-1.878	-32.35	146	.000
Pair 3	Structure1 - Structure2	-.422	1.104	.091	-.602	-.242	-4.633	146	.000

5. Discussion

RQ 1: How do collaborative discussions enhance academic writing development among university EFL students?

The findings demonstrate that collaborative discussions significantly contribute to the development of academic writing among university EFL students. Through peer interaction, idea negotiation, and collaborative problem-solving, students were able to refine their arguments and improve the coherence of their writing.

Quantitative findings

The quantitative results clearly show a substantial improvement in students' academic writing performance, as measured by pre-test and post-test scores. Before the intervention, the pre-test results indicate a mean score of 2.41, which falls closer to "fair" on the writing scale. This suggests that, prior to engaging in group discussions, students' writing was generally mediocre, with significant variability in performance (*SD* = 0.985), highlighting disparities in writing skills among the cohort.

Post-intervention, the students' mean writing score increased to 3.40, shifting between "good" and "very good." This improvement demonstrates the effectiveness of group discussions in enhancing students' overall writing abilities. Additionally, the reduction in the standard deviation to 0.657 indicates that students' performances became more uniform after the intervention, suggesting that group discussions not only improved writing skills but also reduced the gap between higher- and lower-performing students.

Qualitative findings

The focus group discussions provided rich qualitative insights into how group discussions facilitated these improvements. Several key themes emerged:

Collaborative idea generation

Many students reported that group discussions encouraged them to explore new ideas. The collaborative nature of discussions enabled participants to build upon each other's thoughts, resulting in more diverse and stronger content for their essays. This element of group discussions was particularly effective in helping students who struggled with idea generation, as peers inspired them with fresh perspectives.

Peer feedback and error correction

Group discussions provided a platform for students to receive constructive criticism from their peers. Participants emphasized the value of multiple perspectives in identifying weaknesses in their writing, such as overlooked errors or unclear arguments. This feedback loop helped students revise and improve their work more effectively than working in isolation.

- **Improvement in structure and organization:** A notable number of students reported improvements in the structure of their essays after group discussions. Listening to how their peers organized their writing helped them understand how to better structure their own essays, contributing to more coherent and logically organized academic writing.

- **Increased confidence and motivation:** In addition to skill improvement, group discussions had a positive impact on students' confidence. Many participants felt more assured about their writing abilities after receiving positive feedback from their peers. This boost in confidence motivated them to put more effort into their writing, further enhancing their performance.
- **Exposure to diverse perspectives:** Group discussions exposed students to a range of perspectives, helping them broaden their understanding of writing topics. This exposure allowed them to incorporate more sophisticated and nuanced ideas into their writing, enriching the quality of their essays.

While the overall feedback was positive, a few students raised concerns about time management during group discussions. Some sessions became too lengthy or veered off-topic, which detracted from the focus on improving writing. These findings point to the need for better facilitation to ensure discussions remain productive and time-efficient.

RQ 2: What aspects of group discussions contribute most to enhancing the teaching and learning of academic writing?

The significant improvements in argumentation and coherence suggest that the most beneficial aspects of group discussions are those that involve critical peer feedback, exchanging diverse perspectives, and engaging in collective problem-solving. Argumentation benefitted greatly from discussions where students could challenge each other's ideas and offer constructive criticism, helping each participant to refine their arguments and improve their reasoning skills.

For coherence, the interactive nature of group discussions appears to have aided students in structuring their thoughts more clearly. The opportunity to hear how others approach the organization of their writing likely helped students learn strategies to create a logical flow between ideas.

On the other hand, structure benefitted less from group discussions, suggesting that while discussions helped with higher-level aspects of writing, more explicit instruction on formal structural elements (such as essay outlines or transitions between sections) may be necessary to see larger improvements in this area.

6. Conclusion

The findings from this study indicate that group discussions significantly enhance students' academic writing, particularly in argumentation and coherence. Group discussions promote active engagement, peer feedback, and diverse viewpoints, all of which contribute to improved writing skills. However, while some improvements in structure were observed, this aspect of writing may require more targeted instructional methods beyond group discussions to achieve more substantial progress. The findings of this study highlight the pedagogical potential of collaborative discussions as an effective strategy for enhancing academic writing in EFL contexts. By creating opportunities for peer interaction, idea negotiation, and constructive feedback, collaborative discussions help students

develop stronger arguments, clearer organization, and greater confidence in their writing. Future research could further investigate how different types of collaborative activities or digital discussion platforms influence writing development in diverse educational settings.

In summary, group discussions are an effective strategy for improving key aspects of academic writing, particularly when it comes to developing well-supported arguments and ensuring coherence. The results suggest that future interventions could incorporate a balanced focus on both content development and formal structure to further enhance students' writing abilities. The findings highlight the pedagogical value of collaborative discussions as an effective strategy for supporting academic writing development in university EFL contexts.

References

1. Bakhtin MM. *The Dialogic Imagination: Four Essays*. University of Texas Press, 1981.
2. Berg EC. The effects of trained peer response on ESL students' revision types and writing quality. *J Second Lang Writ.* 1999;8(3):215-241. [https://doi.org/10.1016/S1060-3743\(99\)80115-5](https://doi.org/10.1016/S1060-3743(99)80115-5).
3. Braine G. *Academic Writing in a Second Language: Essays on Research and Pedagogy*. Ablex Publishing, 2001.
4. Bruffee KA. *Collaborative Learning: Higher Education, Interdependence, and the Authority of Knowledge*. Johns Hopkins University Press, 1999.
5. Cho K, MacArthur C. Student revision with peer and expert reviewing. *Instr Sci.* 2010;38(2):173-198. <https://doi.org/10.1007/s11251-008-9071-0>.
6. Creswell JW, Creswell JD. *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications, 2018.
7. Harris M. Three ways to improve student peer response sessions. *Coll Compos Commun.* 1992;43(1):51-65. <https://doi.org/10.2307/358761>.
8. Hattie J, Timperley H. The power of feedback. *Rev Educ Res.* 2007;77(1):81-112. <https://doi.org/10.3102/003465430298487>.
9. Gokhale AA. Collaborative learning enhances critical thinking. *J Technol Educ.* 1995;7(1):22-30. <https://doi.org/10.21061/jte.v7i1.a.2>.
10. Hyland K, Hyland F. *Feedback in Second Language Writing: Contexts and Issues*. Cambridge University Press, 2019.
11. Laal M, Ghodsi S. Benefits of collaborative learning. *Procedia Soc Behav Sci.* 2012. <https://doi.org/10.1016/j.sbspro.2012.09.012>.
12. Lave J, Wenger E. *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press, 1991.
13. Leki I. The preferences of ESL students for error correction in college-level writing classes. *Foreign Lang Ann.* 1991;24(2):203-218. <https://doi.org/10.1111/j.1944-9720.1991.tb00464.x>.

14. Leki I, Carson J. "Completely different worlds": EAP and the writing experiences of ESL students in university courses. *TESOL Q.* 1997;31(1):39-69. <https://doi.org/10.2307/3587974>.
15. Li M, Zhu W. Explaining dynamic interactions in wiki-based collaborative writing. *Lang Learn Technol*, 2017. <https://doi.org/10.125/44682>.
16. Lopatovska I, Chakraborty S. Peer feedback in learning English writing: Advantages and disadvantages. *Procedia Soc Behav Sci.* 2016;232:466-472. <https://doi.org/10.1016/j.sbspro.2016.10.064>.
17. Liu Y, Hansen J. Peer response in L2 writing classrooms. *J Second Lang Writ.* 2021;52:100735. <https://doi.org/10.1016/j.jslw.2021.100735>.
18. Mackey A, Gass SM. *Second Language Research: Methodology and Design*. Routledge, 2020.
19. Matsuda PK, Silva T. *Culture and Writing: A Review of the Literature*. ERIC Digest, 2005.
20. Mercer N, Howe C. Explaining the dialogic processes of teaching and learning: The value and potential of sociocultural theory. *Learn Cult Soc Interact.* 2012;1(1):12-21. <https://doi.org/10.1016/j.lcsi.2012.03.001>.
21. Mercer N. *Words and Minds: How We Use Language to Think Together*. Routledge, 2000.
22. Palmer PJ. *The Courage to Teach: Exploring the Inner Landscape of a Teacher's Life*. Jossey-Bass, 2007.
23. Prior P. *Writing/Disciplinarity: A Sociohistoric Account of Literate Activity in the Academy*. Lawrence Erlbaum Associates, 1998.
24. Ranalli J. Artificial intelligence and second language writing: Opportunities and challenges. *J Second Lang Writ*, 2023. <https://doi.org/10.1016/j.jslw.2023.100947>.
25. Storch N. Collaborative writing. *Lang Teach.* 2019;52(1):40-59. <https://doi.org/10.1017/S0261444818000320>.
26. Topping KJ. Peer assessment. *Theory Pract.* 2009;48(1):20-27.
27. Tsui ABM, Ng M. Do secondary L2 writers benefit from peer comments? *System.* 2000;28(2):147-170. [https://doi.org/10.1016/S0346-251X\(00\)00022-9](https://doi.org/10.1016/S0346-251X(00)00022-9).
28. Tuzi F. The impact of e-feedback on the revisions of L2 writers in an academic writing course. *Comput Compos.* 2004;21(2):217-235. <https://doi.org/10.1016/j.compcom.2004.02.003>.
29. Yu S, Lee I. Peer feedback in second language writing. *Lang Teach.* 2016. <https://doi.org/10.1017/S026144481600016X>.
30. Vygotsky LS. *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press, 1978.
31. Wegerif R. *Dialogic Education and Technology: Expanding the Space of Learning*. Springer, 2007.
32. Wells G. *Dialogic Inquiry: Towards a Sociocultural Practice and Theory of Education*. Cambridge University Press, 1999.
33. Wolfe JL. Interacting with peers in small groups: Costs, benefits, and implications for writing performance. *J Second Lang Writ.* 2003;12(1):3-24. [https://doi.org/10.1016/S1060-3743\(02\)00106-4](https://doi.org/10.1016/S1060-3743(02)00106-4).
34. Wolfe JL. *Peer Response in the Composition Classroom: Theory and Practice*. Bedford/St. Martin's, 2016.
35. Zhang M, Hyland K. Fostering collaborative writing through peer interaction in digital learning environments. *J Second Lang Writ.* 2023. <https://doi.org/10.1016/j.jslw.2023.100937>.
36. Zhou M. Collaborative writing and critical thinking: A case study. *J Writ Res.* 2018;10(3):479-503. <https://doi.org/10.17239/jowr-2018.10.03.03>.