

Fostering EFL Writing Proficiency: The Impact of Dialogic Scaffolding in Digital Learning Environments

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Research Paper

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Abstract: This study examines the impact of dialogic scaffolding on improving paragraph-writing skills among intermediate Iranian EFL learners. Drawing on Vygotsky's sociocultural theory and its concept of the Zone of Proximal Development (ZPD), the research integrates teacher-led feedback and peer collaboration in a technology-supported learning environment. Using a mixed-methods design, 60 participants were divided into experimental and control groups and participated in a 15-week intervention facilitated through Google Classroom and Zoom for synchronous and asynchronous interactions. Google Classroom and Zoom enhanced collaboration by enabling real-time peer feedback and asynchronous access to resources, while also increasing accessibility for learners across different geographical locations. Quantitative analysis demonstrated substantial improvements in the experimental group regarding structural coherence, grammatical accuracy, and topic sentence clarity, with effect sizes ranging from 0.79 to 0.89 ($p < 0.001$). Additionally, qualitative findings underscored the essential role of iterative feedback in promoting learner autonomy and engagement. The results highlight the effectiveness of dialogic scaffolding as a pedagogical strategy for enhancing EFL writing skills, particularly when integrated with digital tools to support accessibility and collaboration. This study provides practical insights for educators, emphasizing the potential of dialogic scaffolding to bridge theoretical frameworks and innovative teaching methods. The findings contribute to the broader discourse on incorporating sociocultural theory into EFL instruction, showcasing its ability to foster both linguistic proficiency and learner independence in digital learning contexts.

Keywords: Dialogic Scaffolding, EFL Writing Instruction, Paragraph Writing, Technology-Mediated Learning, Vygotsky Sociocultural Theory

Introduction

Mastering writing skills in a second language poses profound challenges, notably in structuring coherent and organized paragraphs—a crucial academic competence. This difficulty is accentuated for learners lacking systematic education in writing strategies and paragraph formation, as underscored by recent scholarship (Mahboudi & Javdani, 2012; Marefat & Heidari, 2018; Sohrabi & Keyvanfar, 2022). Vygotsky's sociocultural theory illuminates the pivotal role of scaffolding as a supportive mechanism, enabling learners to perform tasks within their Zone of Proximal Development (ZPD) that would otherwise be beyond their reach (Lantolf & Thorne, 2006; Vygotsky, 1978). Despite the recognized efficacy of scaffolding, its specific application in paragraph writing for Iranian EFL learners has not been adequately explored, revealing a significant gap in EFL pedagogy.

This study seeks to address this lacuna by implementing a dialogic scaffolding approach tailored to enhance paragraph writing skills among Iranian intermediate EFL learners. The integration of digital tools in scaffolding has been shown to enhance collaborative learning and feedback processes. For instance, Besharati (2018) demonstrated the efficacy of using Google Docs for dynamic assessment in EFL writing, where learners received real-time feedback and engaged in collaborative revisions. This study underscores the potential of technology-mediated scaffolding to foster learner autonomy and improve writing skills in digital learning environments. By fostering structured yet flexible dialogic interactions, this approach adheres to and enhances Vygotsky's theory, suggesting that meaningful social interactions are essential for cognitive development. The

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introduction of dialogic scaffolding is poised to significantly advance the field of EFL education by providing a nuanced strategy that promotes linguistic accuracy and cognitive sophistication in paragraph writing. This research fills a critical gap and sets a precedent for integrating sociocultural theoretical frameworks into practical EFL instruction, potentially transforming educational practices for language learners globally.

Literature Review

Acquiring effective writing skills in a foreign language is a critical educational objective, particularly for learners aiming to express their thoughts clearly and coherently through written text (Jiang, & Kalyuga, 2022). This literature review explores the role of scaffolding in teaching foreign language paragraph writing, with a focus on EFL learners, integrating Vygotsky's (1978) sociocultural theory and the Zone of Proximal Development (ZPD) as the foundational theoretical frameworks.

Sociocultural Theory and Scaffolding

Vygotsky's sociocultural theory highlights the vital role of social interaction in cognitive development, introducing the Zone of Proximal Development (ZPD) to describe the difference between what learners can do alone versus with skilled guidance. Building on this, Aljaafreh and Lantolf (1994) developed the concept of scaffolding, where educators provide tailored support that diminishes as learners gain independence, bridging the ZPD gap (Larkin, 2001). This approach is effective in writing instruction, improving both grammatical skills and the organization of ideas (Baylon, 2023; Hassen et al, 2023; Lantolf & Thorne, 2006). In Iran, EFL learners struggle to write coherent paragraphs despite good grammatical skills, often due to limited practical writing opportunities (Baradaran & Sarfarazi, 2011; Okati et al., 2022), highlighting the need for instructional strategies that enhance both grammatical precision and writing coherence.

Empirical Studies on Scaffolding in EFL Writing Instruction

Recent studies have demonstrated the effectiveness of scaffolding in improving paragraph writing among EFL learners. For example, Nguyen et al. (2024) investigated the impact of genre-based scaffolding on Vietnamese EFL learners' paragraph writing and found significant improvements in coherence and cohesion. Their study emphasized the importance of scaffolding in helping learners organize ideas logically and use transitional phrases effectively, which are critical for paragraph-level writing.

Similarly, Yang (2022) explored the use of scaffolding in teaching argumentative paragraph writing to Chinese EFL learners. The study revealed that scaffolding techniques, such as guided feedback and peer collaboration, significantly enhanced learners' ability to construct well-organized paragraphs with clear topic sentences and supporting details. This aligns with the findings of Klimova (2020), who demonstrated that scaffolding improved learners' ability to write abstracts and summaries by focusing on critical thinking and summarization skills, which are essential for paragraph-level writing.

In the Iranian EFL context, Baradaran and Sarfarazi (2011) examined the impact of scaffolding on academic paragraph writing and found that tailored scaffolding strategies improved learners' ability to write coherent and structured paragraphs. Their study highlighted the importance of iterative feedback in helping learners refine their writing, particularly in terms of grammatical accuracy and logical flow. Furthermore, Piamsai (2020) investigated the effects of scaffolding on non-proficient EFL learners' paragraph writing and found that scaffolding significantly improved their ability to write clear and concise paragraphs. The study emphasized the role of scaffolding in bridging learning gaps, particularly for learners struggling with structural coherence and organization. In addition to above studies, Mellati, Alavi, and Dashtestani (2022) compared the impact of peer, teacher, and mixed feedback on Iranian EFL learners' writing achievements. Their findings revealed that mixed feedback, which combines teacher and peer feedback, significantly enhanced learners'

writing performance, particularly in terms of structural coherence and grammatical accuracy. This aligns with the principles of dialogic scaffolding, where iterative feedback and collaborative learning processes are emphasized.

These studies collectively underscore the multifaceted benefits of scaffolding in enhancing paragraph-level writing skills, particularly in terms of coherence, organization, and clarity. By providing targeted support and iterative feedback, scaffolding enables EFL learners to develop the skills necessary for effective paragraph writing, aligning with the principles of Vygotsky's Zone of Proximal Development (ZPD).

Scaffolding, a key pedagogical strategy in EFL writing, involves providing learners with temporary support through instructional techniques that enable them to perform tasks beyond their current capabilities. The findings of Afruzi et al. (2022) resonate with this educational approach, highlighting how different types of corrective feedback—direct, indirect, and metalinguistic—act as scaffolding by guiding learners toward greater linguistic accuracy and proficiency. These feedback types, especially when combined with opportunities for revision, offer targeted support that helps learners internalize grammatical rules and refine their writing skills. This adaptive support aids immediate learning and fosters learners' ability to apply grammatical structures independently in varied contexts, aligning with our study's focus on examining the nuanced interactions between feedback type and learner outcomes. By integrating these feedback mechanisms, we can further understand how scaffolding through corrective feedback facilitates the development of writing competence in EFL learners, thus enhancing educational practices in language learning environments. Moreover, the versatility of scaffolding is highlighted through its application in varied instructional settings. Khojasteh, et al. (2021) showcased that both flipped and traditional classroom environments could leverage scaffolding to enhance learners' academic writing, indicating its broad applicability. Additionally, the integration of technology in scaffolding strategies, as explored by Baradaran and Sarfarazi (2012), has proven successful in improving the writing skills of Iranian EFL learners, pointing to the potential of combining traditional scaffolding with modern educational technologies. Further depth is added to this field of study by Bataineh and Obeiah (2016), who investigated the dual application of scaffolding with portfolio assessment. Their findings suggest scaffolding can lead to superior educational outcomes when combined with other pedagogical techniques. This notion is complemented by the work of Baleghizadeh and Timcheh Memar (2011), who examined the effects of varying the scaffolding structure—high versus low—and reported significant differences in its impact on learners' writing abilities.

The utility of scaffolding in enhancing higher-order cognitive skills is also noteworthy. Hasan and Karim (2019) emphasized that well-implemented scaffolding fosters critical analytical abilities essential for advanced writing tasks. This cognitive advancement is supported by innovative approaches such as those by Rodliyah, et al (2017), who combined scaffolding with self-correction and peer review to significantly improve undergraduate learners' academic writing. Research specifically targeting paragraph writing has shown that scaffolding can enhance both the structural and content quality of learners' writing. For example, Nguyen et al (2024) found that genre-based scaffolding significantly improved the coherence and cohesion of paragraphs written by Vietnamese EFL learners. Further, studies by Yang (2022) and Klimova (2020) have demonstrated that scaffolding can aid the development of argumentative and abstract writing skills, by focusing on critical thinking and summarization abilities.

The expansion of scaffolding into digital learning environments is examined by Kitjaroonchai and Phutikettrikit (2022), who found that online scaffolding strategies effectively support Asian EFL learners. This adaptation to online platforms underscores scaffolding's utility in traditional and contemporary digital learning environments, facilitating collaborative and independent learning. Therefore, the diverse applications and proven effectiveness of scaffolding across different contexts—from traditional classrooms to online platforms, from basic language learning to complex academic writing—affirm its essential role in EFL education. These studies collectively advocate for the inclusion of scaffolding strategies in EFL curricula to cater to the varied needs of learners, enhancing both their linguistic and cognitive academic skills.

Dialogic Scaffolding

Dialogic scaffolding involves using targeted conversational techniques that encourage learners to engage in critical thinking and articulate their learning processes. This approach supports the scaffolding of language skills and fosters a deeper understanding of writing structures. Mercer and Dawes (2014) highlight the effectiveness of dialogic teaching methods in enhancing cognitive and linguistic skills within diverse educational settings. Their work supports using dialogue as a powerful tool for scaffolding learning in EFL contexts, making it particularly effective for teaching complex skills such as paragraph writing.

The efficacy of dialogic scaffolding is supported by a growing body of empirical research demonstrating its benefits across various educational contexts. Studies have shown that dialogic interactions can significantly enhance EFL learners' reading comprehension, vocabulary acquisition, and writing structure ([Scaffolding through dialogic teaching in early school classrooms](#)). These findings suggest that beyond merely improving language proficiency, dialogic scaffolding enriches learners' ability to articulate and organize their thoughts, thus improving academic writing outcomes (Muhonen, et al., 2016; Allen et al, 2015).

Moreover, the integration of dialogic scaffolding with digital technologies has been shown to be highly effective in contemporary learning environments. Kitjaroonchai and Phutikettrkit (2022) demonstrated that online platforms that facilitate dialogic interactions can significantly enhance the learning experiences of Asian EFL learners, supporting the scalability and adaptability of this scaffolding approach in both traditional and online classrooms. In summary, the diverse applications and proven effectiveness of dialogic scaffolding across various contexts underscore its pivotal role in EFL education. By facilitating intensive and reflective dialogue, this approach not only improves linguistic skills but also develops critical cognitive abilities essential for academic writing success.

Goals and Research Questions

The primary goal of this study is to investigate the effects of dialogic scaffolding on the development of paragraph writing skills among intermediate Iranian EFL learners. The research also aims to assess how interactive dialogues facilitated by teachers, and peer-to-peer communication in digital learning environments, enhance the learners' ability to write coherent and structured paragraphs.

To achieve the above goals, the study will address the following research questions:

Research Question One: How does dialogic scaffolding affect the paragraph writing skills of intermediate Iranian EFL learners in terms of structural coherence and linguistic accuracy?

Research Question Two: In what ways do interactive dialogues between teachers and learners, and among peers, contribute to the learners' writing skill development within their Zone of Proximal Development?

Research Question Three: What are the perceived benefits and challenges of using dialogic scaffolding from the perspectives of both learners and teachers in the Iranian EFL context?

Methodology

Design of the Study

This study employed a mixed-methods research design to investigate the impact of dialogic scaffolding on paragraph-writing skills among intermediate Iranian EFL learners. A pre-test/post-test design with a control group was used to quantitatively measure improvements in structural coherence, grammatical accuracy, and clarity of topic sentences. This design is particularly well-suited for measuring the impact of dialogic scaffolding because it allows for the establishment of causality by comparing the experimental group (which received the intervention) with the control group (which

did not). By administering a pre-test before the intervention and a post-test after, the design enables the measurement of changes in writing skills over time, while controlling for potential confounding variables such as prior knowledge or external influences. Additionally, the inclusion of a control group helps to isolate the effects of the intervention, ensuring that any observed improvements can be attributed to the dialogic scaffolding approach rather than other factors.

Qualitative data from structured interviews, feedback forms, and observational checklists were also collected to capture participants' perceptions and engagement. These qualitative data sources were integrated into a thematic analysis to identify recurring patterns and themes related to the participants' experiences with dialogic scaffolding. For example, data from feedback forms and observational checklists were coded alongside interview transcripts to provide a comprehensive understanding of how participants perceived the scaffolding process and how it influenced their writing skills. This integration ensured that the qualitative findings were contextualized within the broader framework of the study, allowing for a more nuanced interpretation of the intervention's impact.

The mixed-methods approach combined measurable outcomes with subjective learner experiences to provide a comprehensive evaluation of the intervention. Quantitative data offered statistical evidence of change, while qualitative insights contextualized these improvements, ensuring a holistic interpretation through triangulation. A control group provided a baseline for comparison, participating in teacher-centered writing instruction with no dialogic or interactive components.

Ethical considerations were rigorously upheld throughout the study. Participants provided informed consent and were briefed on their rights, including the ability to withdraw at any stage. Data confidentiality was maintained through encrypted storage of session recordings and restricted access to authorized researchers. Institutional approval ensured compliance with ethical research standards.

A pilot study refined tools and procedures, testing the clarity of the focused writing assessment rubric, the usability of platforms, and the consistency of instructor training. Grounded in Vygotsky's sociocultural theory, the study design emphasized dialogic interactions within the Zone of Proximal Development (ZPD), providing a theoretical framework for evaluating the potential of dialogic scaffolding to enhance EFL writing skills.

Participants

This study involved 60 intermediate Iranian EFL learners, who were selected from a pool of undergraduate students enrolled in English language courses at three public universities across Iran (University of Tehran, Shiraz University, and Ferdowsi University of Mashhad). The participants were chosen through purposive sampling to ensure they met specific criteria for English proficiency (intermediate level, as determined by a standardized TOEFL test) and willingness to participate in a 15-week online intervention. The sample included learners aged 22 to 30 years, with the gender distribution of 32 men and 28 women, representing a diverse range of academic disciplines and professional backgrounds.

Participants were randomly assigned to either the experimental group (n=30) or the control group (n=30) using a computer-generated random number sequence. This randomization ensured unbiased allocation and balanced group characteristics in terms of gender, age, and initial writing proficiency. Baseline assessments, including a standardized TOEFL test and a focused writing assessment, confirmed no significant differences between the two groups in terms of English proficiency or initial writing skills ($p > 0.05$).

The intervention was conducted entirely online, utilizing Google Classroom for asynchronous activities (e.g., assignment submissions, access to materials, and written feedback) and Zoom for synchronous sessions. The classes met once a week for 90-minute sessions over the course of 15 weeks. Each session was structured to include a combination of teacher-led instruction, peer collaboration, and individual writing tasks. The experimental group engaged in dialogic scaffolding activities, which included teacher-guided discussions, peer reviews, and iterative feedback, while the

control group received traditional, teacher-centered instruction without peer collaboration or scaffolding techniques.

Recruitment posed challenges due to varying levels of participant availability and scheduling conflicts across different universities. To address this, the study offered flexible scheduling options, including multiple session times, to accommodate participants' academic and personal commitments. Participants were informed of the study's requirements and time commitments during the recruitment phase, and proactive communication was maintained throughout the intervention to minimize attrition. Despite these efforts, some participants faced occasional technical issues, such as unstable internet connections, which were mitigated by providing recorded sessions and troubleshooting resources.

To ensure no attrition during the 15-week study, several retention strategies were implemented beyond flexible scheduling. Participants received individualized feedback on their writing progress, which helped maintain their motivation and engagement throughout the intervention. Instructors conducted regular check-ins with participants to address any concerns, provide encouragement, and reinforce the importance of their continued participation. The use of collaborative group discussions fostered a sense of community among participants, making them feel more accountable and engaged in the study. Additionally, participants' achievements were highlighted and celebrated during sessions, which boosted their confidence and motivation to continue. The research team also maintained proactive communication with participants, sending reminders and updates to ensure they remained engaged and committed to the study. These strategies collectively contributed to the zero-attrition rate reported in the study, as they addressed both the logistical and motivational challenges that often lead to participant dropouts in long-term studies.

Ethical approval was obtained from the participating universities, and all participants provided informed consent before the study began. They were briefed on their rights, including the ability to withdraw at any stage without penalty. Data confidentiality was maintained through encrypted storage of session recordings and restricted access to authorized researchers. The demographic distribution, group assignments, and baseline characteristics of the participants are summarized in Table 1.

Table 1

Detailed Demographic and Group Characteristics of Participants

Characteristics	Details
Total Participants	60 Intermediate EFL learners
Universities	University of Tehran, Shiraz University, Ferdowsi University of Mashhad
Groups	Experimental (n=30), Control (n=30)
Age range (Mean± SD)	22–30 years (Mean: 26.3 ± 2.5)
Gender Distribution	32 men, 28 women
Baseline Proficiency Test	Standardized TOEFL test (Mean ± SD: 87.4 ± 5.2)
Initial Writing Assessment	Focused writing assessment (p > 0.05 across groups)
Randomization Method	Computer-generated random number sequence
Attrition Rate	None reported during the study
Engagement Strategies	Weekly updates, individual achievements highlighted, flexible scheduling, collaborative group discussions, personalized feedback, and regular motivational check-ins
Recruitment Challenges	Scheduling conflicts and participant availability managed with flexible session timings and proactive communication
Ethical Considerations	Institutional approval, informed consent, data confidentiality maintained

Instruments

This study employed two primary instruments to evaluate participants' paragraph-writing skills: the TOEFL test and a focused writing assessment. The TOEFL test assessed general English proficiency, focusing on the writing section to establish a baseline for participants' abilities. The focused writing assessment, specifically developed for this study, measured structural coherence, grammatical accuracy, and clarity of topic sentences. Participants wrote paragraphs on culturally relevant topics, such as "The Impact of Social Media on Iranian Youth," "The Role of Family in Iranian Society," and "The Benefits of Learning English in a Globalized World." These topics were chosen to ensure cultural relevance and to engage participants in meaningful writing tasks that reflect their lived experiences.

The focused writing assessment was developed through a rigorous process. Initially, a draft rubric was created based on established principles of effective writing, including coherence, grammatical accuracy, and clarity of topic sentences. This draft was reviewed by a panel of three experts in EFL writing instruction to ensure its comprehensiveness and cultural appropriateness. The experts provided feedback on the rubric's criteria, which were subsequently refined. For example, the criterion for "structural coherence" was expanded to include the use of transitional phrases and logical flow, while "grammatical accuracy" was clarified to focus on common errors observed in intermediate EFL learners. The final rubric was pilot-tested with a group of 10 EFL learners who were not part of the main study. Based on their performance and feedback, further adjustments were made to the rubric to ensure its clarity and applicability.

The rubric achieved an inter-rater reliability of 0.87 (Cohen's Kappa), ensuring consistent evaluations among scorers. To maintain scoring consistency over time, the rubric was reassessed at multiple points during the study, including at the mid-point and conclusion of the intervention. This reassessment involved re-evaluating a sample of participants' paragraphs using the rubric and comparing the scores to ensure that the criteria were applied consistently throughout the study. Any discrepancies were discussed among the evaluators, and adjustments were made to maintain scoring reliability.

To enhance validity, rubric criteria were aligned with established principles of effective writing and reviewed by experts for comprehensiveness and cultural relevance. Construct validity was demonstrated by a significant positive correlation ($r=0.82$, $p<0.01$) between the focused writing scores and TOEFL writing scores. This correlation was calculated by administering both assessments to a pilot group of 20 EFL learners and analyzing the relationship between their scores. The strong positive correlation indicated that the focused writing assessment effectively measured the same underlying construct (writing proficiency) as the TOEFL writing section, thereby supporting its construct validity. Additionally, feedback from participants during the pilot phase confirmed that the assessment tasks were aligned with real-life writing contexts, further strengthening its validity.

The intervention incorporated scaffolding techniques based on Vygotsky's sociocultural theory, focusing on teacher-guided dialogues, peer-to-peer reviews, and gradually reduced support to promote autonomy. Teachers provided real-time feedback to participants, while peers critiqued each other's paragraphs using a structured rubric with prompts such as identifying strengths and suggesting specific improvements. These structured activities ensured consistency in the feedback process and fostered collaboration among participants.

Data collection tools included observation checklists and weekly feedback forms. Observation checklists recorded engagement metrics such as the frequency of participant-initiated contributions, the complexity of revisions (e.g., restructuring paragraphs or correcting multiple grammatical errors), and the quality of peer feedback. For example, checklists noted the number of peer-to-peer interactions during each session and the depth of suggestions provided. Feedback forms captured participants' perceptions of the scaffolding process through questions like, "What aspect of peer feedback was most helpful for improving your paragraph this week?" Responses provided qualitative insights into participants' experiences and helped refine instructional strategies during the

intervention. Technology played a central role in delivering the intervention. Google Classroom facilitated asynchronous sharing of materials, assignment submissions, and access to feedback, while Zoom supported synchronous sessions with features such as breakout rooms for small-group discussions. Troubleshooting guides and training resources ensured participants could navigate these platforms effectively, minimizing disruptions.

Procedure

The study was conducted in three phases: Pre-Intervention, Intervention, and Post-Intervention, over a period of 15 weeks. Each phase was carefully structured to align with the research objectives and answer the study's research questions.

Pre-Intervention Phase

Participants were recruited through purposive sampling, targeting intermediate Iranian EFL learners who met specific criteria for English proficiency and willingness to participate. A total of 60 participants were randomly assigned to the experimental group (n=30) or the control group (n=30) using a computer-generated randomization process stratified by age and gender to ensure balanced group characteristics. Baseline assessments, including a standardized TOEFL test and a focused writing assessment, were administered to establish participants' general proficiency and initial writing skills. Results confirmed no significant differences between groups ($p > 0.05$), ensuring equivalence.

Instructors underwent comprehensive training to ensure consistent delivery of the intervention. Training sessions covered the application of scaffolding techniques, moderating peer reviews, and scoring practices using the focused writing assessment rubric. Inter-rater reliability (Cohen's Kappa = 0.87) was achieved during training to maintain scoring consistency.

Intervention Phase

The intervention lasted 15 weeks, with participants attending weekly 90-minute sessions. The experimental group engaged in dialogic scaffolding activities, which included teacher-guided dialogues, peer-to-peer reviews, and gradually reduced instructor support to foster autonomy. For example, teacher-guided dialogues involved analyzing sample paragraphs to identify transitions and logical flow, followed by participants revising their work based on real-time feedback. Peer-review activities required participants to highlight strengths and suggest specific improvements in their peers' paragraphs, fostering critical thinking and collaboration.

The control group, in contrast, received traditional instruction that focused on teacher-led explanations of paragraph structure, grammar rules, and sample analyses without peer collaboration or scaffolding techniques. For instance, participants reviewed sample paragraphs with corrections provided by the instructor, emphasizing passive learning. Both groups used Google Classroom to access materials and submit assignments, while Zoom facilitated synchronous sessions with features such as breakout rooms for small-group discussions. Minor technical challenges, such as intermittent internet connectivity, were mitigated by providing troubleshooting resources and recording sessions for later review. The use of Google Classroom and Zoom in this study aligns with previous research on technology-mediated scaffolding. Besharati (2018) utilized Google Docs to facilitate dynamic assessment and collaborative writing, highlighting the benefits of real-time feedback and asynchronous access to resources. Similarly, the current study leverages these digital tools to enhance peer collaboration and iterative feedback, ensuring accessibility and engagement across diverse geographical locations.

Post-Intervention Phase

After the intervention, participants in both the experimental and control groups completed the same focused writing assessment administered during the pre-intervention phase to measure improvements

in paragraph-writing skills. Assessments were scored blindly by trained evaluators using the same five-point rubric to ensure consistency and minimize bias. This rubric, which measured structural coherence, grammatical accuracy, and clarity of topic sentences, was applied uniformly to both groups to allow for a fair comparison of outcomes.

Qualitative data were collected through weekly feedback forms and observation checklists, capturing participant engagement and perceptions. Metrics included the frequency of participant-initiated contributions, the complexity of revisions, and the quality of peer feedback. While the experimental group received dialogic scaffolding—including teacher-guided feedback, peer reviews, and iterative revisions—the control group followed a traditional instruction model. In this model, participants received instructor-led feedback on their writing assignments, but this feedback was not dialogic or iterative, and there was no peer collaboration. Instead, the control group's feedback process focused on corrective feedback provided by the instructor, with limited opportunities for revision or interaction.

For example, while the experimental group engaged in structured peer reviews and iterative feedback cycles, the control group reviewed sample paragraphs with corrections provided by the instructor, emphasizing passive learning. This difference in feedback processes highlights the distinct instructional approaches used in the two groups and underscores the role of dialogic scaffolding in fostering more active and collaborative learning.

Data Analysis

Quantitative data from the pre- and post-intervention focused writing assessments were analyzed to evaluate changes in participants' paragraph-writing skills. Three key metrics—structural coherence, grammatical accuracy, and clarity of topic sentences—were assessed. Data were processed using SPSS (Version 28) for statistical analysis.

To ensure the validity of the t-test results, several assumptions were considered and addressed:

1. Normality: The Shapiro-Wilk test was used to confirm that the data were normally distributed, with no significant violations detected.
2. Independence: The independence of observations was ensured by assigning participants to either the experimental or control group through randomization, and no participant was included in both groups.
3. Homogeneity of Variance: Levene's test was performed to verify the homogeneity of variances between the groups, ensuring that the variances were approximately equal for valid group comparisons.

To measure within-group changes in writing performance, paired t-tests were conducted, comparing pre- and post-test scores for both the experimental and control groups. Independent samples t-tests were performed to compare improvements between the two groups. Effect sizes (Cohen's *d*) were calculated to evaluate the practical significance of the observed changes. Benchmarks of 0.2 for small effects, 0.5 for medium effects, and 0.8 for large effects were used to interpret results. For example, a bar graph comparing mean pre- and post-test scores for grammatical accuracy revealed a significant improvement in the experimental group ($p < 0.05$, $p < 0.05$, Cohen's $d = 0.72$) compared to minimal change in the control group. Data visualizations, including bar graphs and tables, were used to summarize the results, ensuring clarity in the presentation of findings.

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comparisons.

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Qualitative data collected through feedback forms and observation checklists were analyzed using thematic analysis to explore participants' perceptions and engagement. Thematic analysis followed a systematic process, beginning with open coding to identify recurring patterns in the data. Initial codes, such as "usefulness of peer feedback," "challenges with instructor prompts," and "increased confidence in writing," were identified and grouped into broader themes, including "perceived improvement in writing skills," "the effectiveness of dialogic scaffolding," and "barriers to understanding." The coding process was facilitated using NVivo 12, a qualitative data analysis software, which allowed for efficient organization and management of the data.

The coding process was conducted independently by two researchers to ensure objectivity and reduce bias. Discrepancies in coding were resolved through consensus meetings, where the researchers discussed and reconciled differences to achieve agreement. This iterative process ensured that the themes were refined and accurately reflected the participants' experiences. To further enhance reliability, inter-coder reliability was calculated using Cohen's Kappa, which yielded a high agreement score of 0.82, indicating strong consistency between the coders.

Thematic analysis also involved member checking, where participants were given the opportunity to review and validate the themes identified from their feedback. This step ensured that the interpretations accurately represented their perspectives and experiences. Additionally, triangulation was employed by cross-referencing data from feedback forms, observation checklists, and structured interviews to ensure the credibility and trustworthiness of the findings.

Observation checklist data were analyzed both quantitatively and qualitatively. Engagement metrics, such as the frequency of participant-initiated contributions, the complexity of revisions (e.g., restructuring paragraphs or correcting multiple grammatical errors), and the quality of peer feedback, were coded numerically and analyzed using descriptive statistics. Qualitative insights from the checklists further contextualized participant behavior, revealing patterns in interaction dynamics and responses to scaffolding techniques.

Integration of Quantitative and Qualitative Data

The study employed a mixed-methods triangulation approach to integrate quantitative and qualitative findings. Quantitative data provided measurable evidence of improvement, while qualitative insights explained the processes contributing to these changes. For instance, significant gains in grammatical accuracy scores in the experimental group were supported by participant feedback emphasizing the role of peer reviews in identifying specific errors. Similarly, themes such as increased confidence in writing aligned with quantitative improvements in structural coherence scores.

Analysis of Control Group Data

Qualitative feedback from the control group highlighted the limitations of traditional instruction. Participants noted a reliance on instructor-led feedback, which limited opportunities for collaboration and reduced engagement. For example, while control group participants expressed less confidence in their independent writing abilities, the experimental group frequently highlighted the value of peer interaction and dialogic processes in fostering autonomy and collaborative learning. These insights

provided a meaningful contrast to the experimental group's findings and contextualized the quantitative differences observed between the groups.

It is important to note that control group participants were not explicitly informed about the experimental group's instructional approach. To minimize potential bias, the study design ensured that both groups were treated equally in terms of session structure and access to resources, with the only difference being the instructional method (traditional vs. dialogic scaffolding). This approach was taken to prevent response bias or demand characteristics, where knowledge of the experimental group's activities might influence the control group's feedback or behavior. However, it is possible that some participants became informally aware of the differences through casual interactions or discussions outside the study. Despite this, the control group's feedback consistently reflected their experiences with traditional instruction, with no evidence suggesting that their responses were influenced by knowledge of the experimental group's approach.

Results

First Research Question

This study assessed the impact of dialogic scaffolding on paragraph-writing skills among intermediate Iranian EFL learners, with specific attention to structural coherence and linguistic accuracy. Results from quantitative and qualitative analyses indicate significant advantages for the experimental group over the control group, highlighting the efficacy of this instructional approach.

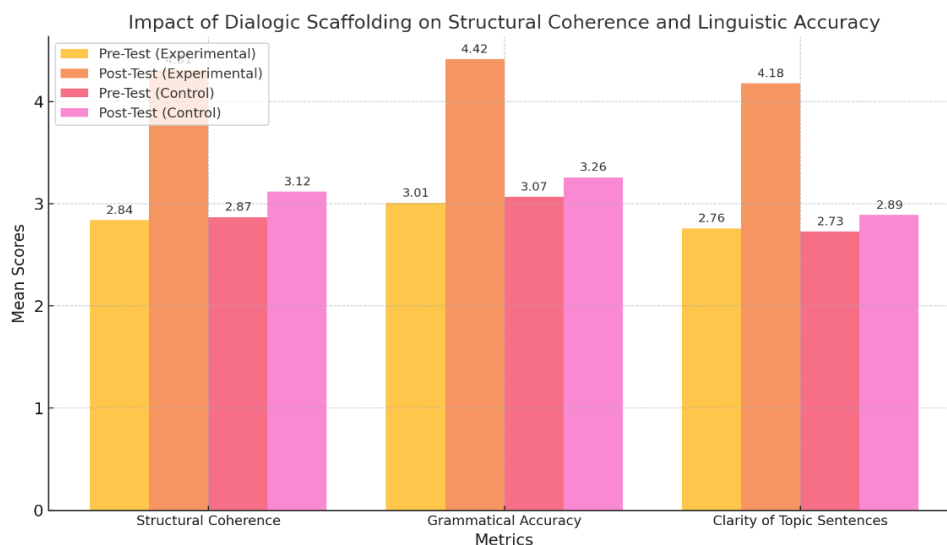
Quantitative analysis revealed marked improvements in structural coherence for the experimental group, with mean scores increasing from 2.84 (SD = 0.61) in the pre-test to 4.31 (SD = 0.48) in the post-test, a statistically significant change ($p < 0.001$, Cohen's $d = 0.79$). The control group showed negligible progress, with scores rising from 2.87 (SD = 0.59) to 3.12 (SD = 0.57) ($p > 0.05$). These findings suggest that dialogic scaffolding's focus on iterative feedback and collaborative discussions enabled learners to organize ideas more effectively and use transitions coherently, whereas the control group's teacher-centered approach lacked the interactive components necessary for substantial improvement.

Grammatical accuracy demonstrated a similar trend. The experimental group's scores improved significantly from 3.01 (SD = 0.63) to 4.42 (SD = 0.46) ($p < 0.001$, Cohen's $d = 0.89$), while the control group exhibited only marginal improvement, with scores increasing from 3.07 (SD = 0.62) to 3.26 (SD = 0.58) ($p > 0.05$). Participants in the experimental group attributed their progress to teacher-led discussions and peer reviews that provided timely and iterative feedback, which helped them identify and rectify recurring grammatical errors.

The clarity of topic sentences also improved significantly in the experimental group, with mean scores rising from 2.76 (SD = 0.64) to 4.18 (SD = 0.52) ($p < 0.001$, Cohen's $d = 0.82$). In contrast, the control group showed minimal gains, with scores increasing from 2.73 (SD = 0.62) to 2.89 (SD = 0.58) ($p > 0.05$). Participants frequently highlighted the role of teacher feedback in improving their ability to construct precise and relevant topic sentences, a focus that was largely absent in the control group's instruction. These trends, along with similar improvements in grammatical accuracy and clarity of topic sentences, are illustrated in Figure 1. Table 2 also summarizes the pre- and post-test mean scores, along with p-values and effect sizes, for structural coherence, grammatical accuracy, and topic sentence clarity in both the experimental and control groups, highlighting the significant improvements achieved through dialogic scaffolding.

Figure 1

Pre- and Post-test Mean Scores for Structural Coherence, Grammatical Accuracy, and Clarity of Topic Sentences in the Experimental and Control Groups

**Table 2**

Quantitative Results of Dialogic Scaffolding Study

Metric	Group	Pre-Test (SD)	Mean	Post-Test (SD)	Mean	p-value (Cohen's d)
Structural Coherence	Experimental	2.84 (0.61)		4.31 (0.48)		< 0.001 (0.79)
	Control	2.87 (0.59)		3.12 (0.57)		> 0.05
Grammatical Accuracy	Experimental	3.01 (0.63)		4.42 (0.46)		< 0.001 (0.89)
	Control	3.07 (0.62)		3.26 (0.58)		> 0.05
Topic Sentence Clarity	Experimental	2.76 (0.64)		4.18 (0.52)		< 0.001 (0.82)
	Control	2.73 (0.62)		2.89 (0.58)		> 0.05

Qualitative data further contextualized these results. Participants in the experimental group consistently reported that dialogic scaffolding deepened their understanding of paragraph structure and grammar. One participant reflected, “*Receiving feedback from both the teacher and peers helped me recognize mistakes and improve my paragraphs step by step.*” Another noted, “*The discussions made it easier to identify where I needed to improve, especially in writing clear topic sentences.*”

In contrast, control group participants expressed dissatisfaction with their instructional approach. One participant remarked, “*We didn't receive enough specific feedback, and I often felt unsure about how to improve my writing.*” The lack of interactive and collaborative elements appeared to hinder the control group's progress, reinforcing the value of dialogic scaffolding in fostering meaningful engagement and skill development.

These findings validate dialogic scaffolding as an effective instructional method for enhancing structural coherence and linguistic accuracy in paragraph writing. The large effect sizes observed across all metrics emphasize the practical significance of this approach. By combining teacher-led guidance with peer feedback and iterative revisions, dialogic scaffolding promotes critical thinking, collaboration, and continuous improvement in learners' writing skills. Furthermore, these results align with Vygotsky's sociocultural theory, which emphasizes the role of social interaction and scaffolding in cognitive development. They also complement prior research demonstrating the value of scaffolding in fostering higher-order thinking and linguistic competence. This study highlights the potential of dialogic scaffolding to transform EFL writing instruction, particularly when integrated with digital tools such as Google Classroom and Zoom. These platforms not only facilitate real-time feedback and collaboration but also expand the accessibility of such interventions to diverse

educational contexts.

Second Research Question

This study explored how interactive dialogues facilitated learners' development within their Zone of Proximal Development (ZPD). Results indicate that dialogic scaffolding effectively bridges the gap between learners' current and potential writing skills, combining teacher-led guidance, peer collaboration, and the gradual withdrawal of support.

Teacher-guided interactions provided the foundation for learners to develop paragraph-writing skills. Instructors offered targeted feedback, modeled problem-solving strategies, and helped participants address structural and grammatical weaknesses. Learners consistently emphasized the value of teacher feedback in clarifying complex writing concepts and enabling them to revise their work more effectively. For instance, one participant remarked, *"The teacher's feedback clarified difficult concepts, such as connecting ideas smoothly, which helped me in using cohesive devices to improve my paragraphs."*

Peer collaboration further reinforced the learning process by encouraging critical evaluation and reflection. Structured rubrics guided participants in providing feedback on each other's paragraphs, focusing on coherence, grammar, and clarity. One participant shared, *"By reviewing my peers' work, I realized common mistakes that also appeared in my own writing. Their feedback gave me new ideas for improvement."*

The complexity of revisions was measured using a structured rubric that evaluated the depth and scope of changes made by participants during the revision process. The rubric categorized revisions into three levels of complexity:

1. Low Complexity: Minor edits, such as correcting spelling errors, punctuation, or simple grammatical mistakes (e.g., subject-verb agreement).
2. Medium Complexity: Revisions involving sentence-level changes, such as rephrasing for clarity, improving word choice, or correcting more advanced grammatical errors (e.g., tense consistency).
3. High Complexity: Substantial revisions, such as restructuring entire paragraphs, improving coherence and cohesion through the use of transitional phrases, or addressing multiple grammatical and structural issues simultaneously.

Each participant's revisions were analyzed by trained evaluators using this rubric. For example, if a participant revised a paragraph by adding transitional phrases to improve coherence and corrected multiple grammatical errors, this would be classified as a high-complexity revision. Conversely, if a participant only corrected minor spelling errors, this would be classified as a low-complexity revision. The evaluators recorded the frequency and type of revisions made by each participant during the intervention, and the results were aggregated to determine the overall complexity of revisions for each group. This method ensured a systematic and objective assessment of the depth of revisions, providing clear insights into the effectiveness of the dialogic scaffolding approach in fostering more complex and meaningful improvements in participants' writing.

Engagement metrics, summarized in Table 3, showed that learners who actively participated in peer reviews demonstrated significantly greater improvement in their paragraph-writing skills than those in the control group.

A unique feature of this intervention was the systematic reduction of teacher support over time, which aligned with the principles of scaffolding. Initially, instructors provided directive feedback, offering explicit corrections and detailed guidance on structural coherence, grammatical accuracy, and clarity of topic sentences. For example, in the early stages, teachers might directly point out errors in sentence structure or suggest specific revisions to improve paragraph organization.

As the intervention progressed, the feedback became increasingly facilitative, encouraging learners to identify and address issues independently. Teachers began to ask guiding questions, such

as, “How can you improve the flow of ideas in this paragraph?” or “What transitional phrases could you use to connect these sentences?” This shift from directive to facilitative feedback encouraged participants to engage in self-reflection and problem-solving, fostering greater autonomy in their writing.

By the conclusion of the intervention, participants demonstrated significant progress in their ability to revise their work independently. One participant reflected, “*At first, I depended on the teacher’s feedback, but by the end, I could identify and fix many issues on my own.*” This progression highlights the effectiveness of scaffolding in promoting independent writing skills and aligns with Vygotsky’s concept of ZPD, where learners gradually internalize skills and strategies with decreasing support.

These findings align with Vygotsky’s sociocultural theory, emphasizing the importance of guided social interaction in skill development. By integrating teacher guidance, peer collaboration, and gradual support withdrawal, dialogic scaffolding empowered learners to master advanced writing skills. Despite its success, the study identified challenges, such as inconsistent peer feedback and occasional technical issues, underscoring the need for robust peer training and technical support. Addressing these challenges could further optimize the approach, making it a more versatile instructional method.

Table 3

Engagement Metrics and Writing Outcomes

Metric	Description	Experimental Group	Control Group
Frequency of Peer Feedback	Average interactions per session	8.4	2.1
Depth of Revisions	Complexity of changes (e.g., grammatical, structural)	High	Low
Confidence in Writing	Self-reported improvement (scale: 1-5)	4.5	3.0
Clarity of Topic Sentences	Mean post-test score	4.18	2.89

Third Research Question

This study explored learner and educator perceptions of dialogic scaffolding in EFL writing instruction, uncovering its transformative potential and challenges.

Learners’ Perceptions: Learners identified several benefits, particularly in building confidence and enhancing their understanding of writing structure. Structured teacher feedback and peer reviews were pivotal in these improvements. For instance, 87% of participants in the experimental group reported increased confidence in their writing abilities by the end of the intervention. One learner explained, “*The teacher’s feedback clarified difficult concepts, such as connecting ideas smoothly, which helped me improve my paragraphs.*” Peer reviews also played a significant role in fostering a collaborative learning environment. A participant noted, “*Sometimes, we discussed our problems as a group without fearing judgment from others because we all had problems to some extent. These discussions helped us understand our mistakes better and avoid repeating them in future paragraphs.*”

However, some learners encountered challenges. Variability in peer feedback quality was a recurring issue, with less experienced peers struggling to provide actionable suggestions. This inconsistency led some participants to rely heavily on teacher input for meaningful guidance. Additionally, technical issues, such as unstable internet connections, disrupted approximately 15% of sessions. While these disruptions were mitigated through recorded sessions and troubleshooting resources, they nonetheless impacted the learning experience.

Educators’ Perceptions: Educators observed significant gains in learners’ autonomy and engagement. Throughout the intervention, learners required progressively less scaffolding, demonstrating greater independence in revising their work. One educator remarked, “*By the end of the program, many students could identify and correct their errors, which was a major milestone.*” The interactive nature of the sessions also fostered a dynamic and collaborative learning environment,

encouraging active participation.

Despite these successes, educators highlighted notable challenges. Providing detailed feedback and moderating peer interactions required 45–60 minutes per session, making the process time-intensive, particularly in larger classes. Ensuring consistency in peer feedback was another concern, with educators recommending more comprehensive training for learners. One educator suggested, “*Additional guidance on how to critique peers’ work effectively would improve the quality of feedback and reduce reliance on instructors.*”

Scalability and Technological Integration: Both learners and educators appreciated the integration of digital platforms such as Google Classroom and Zoom, which facilitated asynchronous access to resources and synchronous discussions. However, scalability remains a challenge. Educators proposed incorporating AI-driven tools or automated feedback systems to support certain aspects of dialogic scaffolding, particularly for larger class sizes. For example, AI tools could provide instant grammar and coherence suggestions, allowing educators to focus on higher-level feedback.

A concise summary of the benefits and challenges identified by learners and educators is presented in Table 4.

Table 4

Perceived Benefits and Challenges of Dialogic Scaffolding

Perspective	Benefits	Challenges
Learners	Improved writing confidence (87%), deeper understanding of writing structure, collaborative learning	Variability in peer feedback, technical disruptions (15% of sessions)
Educators	Increased learner autonomy, dynamic and interactive sessions	Time-intensive feedback process (45–60 min/session), need for peer-review training

This analysis underscores dialogic scaffolding’s potential to enhance EFL writing skills while fostering learner confidence and collaboration. Addressing challenges such as peer feedback variability, technical issues, and scalability is essential for optimizing its implementation. Future studies should explore integrating automated tools to streamline processes and ensure broader applicability across diverse educational contexts.

Discussion

The findings of this study demonstrate the transformative potential of dialogic scaffolding in enhancing paragraph-writing skills among intermediate Iranian EFL learners. Quantitative data revealed significant improvements in structural coherence, grammatical accuracy, and the clarity of topic sentences, with effect sizes underscoring the practical impact of the intervention. The experimental group outperformed the control group across all measures, highlighting the efficacy of iterative feedback and collaborative learning processes. Complementary qualitative insights illustrated how teacher guidance and peer interaction fostered deeper engagement and self-reflection, enabling participants to identify and rectify writing weaknesses progressively.

These findings align with Vygotsky's sociocultural theory, particularly the Zone of Proximal Development (ZPD), where learners achieve higher competence through guided interaction (Vygotsky, 1978). The dialogic scaffolding approach provided tailored support, gradually reduced as learners' skills improved, fostering autonomy and independent problem-solving. This progression reflects the ZPD's core premise. While previous studies have demonstrated the effectiveness of scaffolding in enhancing linguistic accuracy, critical thinking, and collaborative abilities (Ranjbar & Ghonsooly, 2017), this study distinguishes itself in several key ways.

First, in terms of methodology, this study integrates digital tools (Google Classroom and Zoom) to facilitate synchronous and asynchronous interactions, which is a departure from traditional

face-to-face scaffolding approaches. This digital integration not only enhances accessibility but also allows for real-time feedback and collaboration, making the intervention more scalable and adaptable to diverse educational contexts. The integration of digital tools in this study, such as Google Classroom and Zoom, aligns with Besharati's (2018) findings on the use of Google Docs for dynamic assessment. Both studies highlight the role of technology in fostering learner autonomy and engagement, particularly through real-time feedback and collaborative learning processes. This suggests that digital tools can effectively mediate scaffolding, enabling learners to internalize feedback and improve their writing skills.

Second, in terms of focus, this study specifically targets paragraph-level writing skills, including structural coherence, grammatical accuracy, and clarity of topic sentences. While previous research has often focused on broader writing skills or narrative writing, this study provides a more granular analysis of how scaffolding impacts paragraph writing, which is a critical academic skill for EFL learners.

Finally, in terms of outcomes, this study highlights the role of iterative feedback and peer collaboration in fostering learner autonomy and engagement. Unlike studies that rely solely on teacher-led scaffolding, this study demonstrates how combining teacher guidance with peer interaction can lead to more significant improvements in writing skills. These unique methodological, focal, and outcome-related contributions position this study as a valuable addition to the existing literature on scaffolding in EFL writing instruction.

Furthermore, integrating digital tools like Google Classroom and Zoom operationalizes Vygotsky's principles in modern learning environments. These platforms facilitate interactive and collaborative learning environments that align with Vygotsky's emphasis on the social nature of learning (Choukaier, 2024). This integration addresses logistical challenges and enhances learner accessibility, offering a scalable and adaptable model for EFL instruction. The use of digital tools mediates the learning process, promoting understanding and generating thoughts through interaction (Huong & Hung, 2021).

Throughout the intervention, scaffolding evolved in tandem with participants' growing competence. In the early stages, teachers provided directive feedback, offering explicit corrections and detailed guidance on structural coherence, grammatical accuracy, and clarity of topic sentences. As participants gained confidence and skills, the feedback transitioned to a facilitative approach, with teachers asking guiding questions and encouraging learners to identify and address issues independently. By the end of the intervention, participants demonstrated significant autonomy in their writing, reflecting the gradual reduction of support inherent in scaffolding. This progression, supported by digital tools, highlights how technology can enhance the scaffolding process, making it more dynamic and accessible. Comparing these results to earlier studies emphasizes the distinct advantages of dialogic scaffolding in fostering both linguistic competence and learner autonomy. While existing literature has highlighted scaffolding's role in improving writing performance, this study uniquely demonstrates its effectiveness in a digitally mediated, collaborative framework, offering new directions for EFL pedagogy. The integration of digital tools enables a blended learning environment, making interventions more flexible and accessible, and addressing culturally specific learning challenges (Ghahremani-Ghajar & Mirhosseini, 2005). However, it is important to note that the effectiveness of these tools varied slightly based on participants' technical proficiency. While most learners adapted quickly to the platforms, a small number of participants initially struggled with navigating the digital tools, which temporarily hindered their engagement. To address this, the research team provided technical support and training resources, such as troubleshooting guides and step-by-step tutorials, to ensure all participants could effectively use the platforms. By the mid-point of the intervention, these challenges were largely resolved, and all participants were able to fully engage with the digital tools. This suggests that while technical proficiency can impact initial outcomes, adequate support can mitigate these challenges, ensuring equitable access to the benefits of digitally mediated scaffolding.

The findings underscore the practical value of dialogic scaffolding in enhancing paragraph-

writing skills among intermediate Iranian EFL learners. The findings of this study resonate with Mellati et al. (2022), who found that mixed feedback, integrating teacher and peer feedback, led to significant improvements in EFL learners' writing skills. This suggests that combining different feedback sources can scaffold learners more effectively, fostering both linguistic accuracy and learner autonomy. By integrating teacher-guided feedback, peer collaboration, and gradual support reduction, this approach addressed key challenges in structural coherence, grammatical accuracy, and topic sentence clarity. The use of digital platforms facilitated these interactions, allowing learners to engage with feedback asynchronously and synchronously. These results highlight the scalability of dialogic scaffolding in diverse educational settings, particularly where digital resources are available. However, successful implementation requires careful planning, including teacher training and robust technical infrastructure, to ensure consistency and minimize disruptions.

When compared with prior studies, this research reinforces the effectiveness of scaffolding as a pedagogical tool while introducing novel contributions. Unlike traditional scaffolding models that rely heavily on face-to-face interactions, the integration of digital tools enabled a blended learning environment, making the intervention more flexible and accessible. The study also adds to the limited research on scaffolding in Iranian EFL contexts by demonstrating its applicability in addressing culturally specific learning challenges. While previous studies have highlighted scaffolding's role in improving writing skills, this research extends these findings by emphasizing collaborative feedback and the potential for technology to enhance instructional practices. These distinctions position dialogic scaffolding as a viable model for improving EFL writing instruction globally, with implications for further adaptation in various cultural and educational contexts.

The study identified several challenges, notably variability in peer feedback quality, technical disruptions, and the time-intensive nature of providing detailed feedback. Inconsistent peer feedback often stemmed from participants' limited experience in critiquing writing, leading to uneven support among learners. While structured rubrics partially mitigated this issue, a more comprehensive peer-training approach could enhance the reliability and utility of peer reviews. Technical disruptions, though minimized through recorded sessions and troubleshooting resources, occasionally hindered the flow of synchronous discussions, highlighting the need for robust digital infrastructure. Furthermore, the detailed feedback required of educators proved resource-intensive, especially for larger groups, presenting scalability challenges.

The study's reliance on a relatively small sample size of intermediate Iranian EFL learners limits the generalizability of the findings to broader populations. The focus on specific digital platforms, such as Google Classroom and Zoom, while beneficial for this intervention, may not be equally accessible or effective in other educational contexts. Future research should explore alternative tools and methods to broaden the applicability of dialogic scaffolding.

Practical recommendations emerging from this study emphasize the need for structured peer-review training, equipping learners with strategies to provide constructive, actionable feedback. This approach could standardize peer contributions, reducing reliance on teacher input and fostering greater learner autonomy. Integrating AI-driven tools to provide real-time feedback on grammar, coherence, and structure could alleviate the burden on educators, particularly in larger classrooms. For instance, automated tools could complement human feedback by identifying recurring errors, enabling instructors to focus on higher-order writing skills.

Future research should investigate the long-term effects of dialogic scaffolding on writing proficiency, assessing whether improvements in coherence, accuracy, and autonomy are sustained over time. Exploring the approach in more diverse educational settings, including larger and multilingual learner groups, would provide insights into its broader applicability. Additionally, examining cultural factors influencing peer interactions and feedback dynamics could refine the scaffolding process for varied contexts. Integrating automated tools into scaffolding frameworks remains a promising avenue for enhancing scalability while preserving the interactive and iterative essence of the approach.

Conclusion

In this study, the impact of dialogic scaffolding on paragraph-writing skills among intermediate Iranian EFL learners was investigated. The findings indicate that integrating teacher-guided feedback, structured peer reviews, and digital tools such as Google Classroom and Zoom can significantly enhance structural coherence, grammatical accuracy, and clarity of topic sentences. These results contribute to the existing body of knowledge by demonstrating the practical application of Vygotsky's sociocultural theory, particularly the Zone of Proximal Development, in modern, technology-enhanced learning environments. The study underscores the importance of guided interaction and iterative feedback in enabling learners to achieve higher levels of competence.

However, the study also identified challenges, including variability in peer feedback quality, technical disruptions, and the time-intensive nature of providing detailed feedback. These findings suggest that while dialogic scaffolding holds promise, its successful implementation requires careful planning, including teacher training and robust technical infrastructure, to ensure consistency and minimize disruptions. Future research should explore the long-term impacts of dialogic scaffolding on writing proficiency and assess its adaptability across different learner populations and cultural settings. Investigating the integration of automated tools in scaffolding frameworks could further streamline instructional processes while preserving their interactive and iterative nature.

In conclusion, dialogic scaffolding represents a powerful pedagogical tool for improving EFL writing instruction, particularly in contexts that embrace digital innovation. By bridging the gap between learners' current abilities and their potential, this approach not only addresses immediate learning goals but also prepares learners for sustained academic and professional success.

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The author declares that she has no conflicts of interest.

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