



Investigating the Implementation of Peer Scaffolding on Speaking Proficiency in Blended versus Traditional Classes at the Advanced Level

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Abstract

Traditional methods of scaffolding for language teaching have turned out ineffective, leading to the exploration of innovative approaches such as blended learning. While blended learning has shown effectiveness in various language aspects, its impact on scaffolding for speaking proficiency remains unclear. This study investigated the impact of peer scaffolding on speaking proficiency in traditional face-to-face classes versus blended classes. The participants consisted of 42 advanced learners, randomly assigned to a control group (traditional classes) and an experimental group (blended classes). Pre-tests and post-tests were conducted using speaking topics to assess speaking proficiency, and evaluations were done using established criteria. The control group received instruction and speaking practice using conventional methods, while the experimental group had access to online resources and was engaged in face-to-face sessions guided by peers and the teacher. Descriptive statistics and t-tests were employed to analyze the data. The findings indicated that the experimental group, which received peer scaffolding in the mixed class, performed better in speaking ability compared to the group that received peer scaffolding in the conventional class. These findings have implications for language teachers, material developers, and policy makers, emphasizing the potential benefits of integrating peer scaffolding within blended learning environments to enhance speaking proficiency for advanced learners.

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1. Introduction

In the field of education, there is a growing adoption of innovative teaching techniques and strategies to enhance knowledge construction for both educators and learners (Casasnovas & Ferraro, 2021; Rosenberger, 2003; Sun et al., 2021). One such strategy is scaffolding, which incorporates various techniques like teacher modeling, simplified language, visuals, and cooperative learning to facilitate language learning and teaching practices (Ovando et al., 2003; Sawyer, 2006). With the advancement of technology, scaffolding has expanded to include online or vertical scaffolding, utilizing the internet to support learning (Richardson et al., 2022). Incorporating online scaffolding into education has shown positive effects on students' self-regulation, metacognitive skills, motivation, and engagement (Cho & Cho, 2016; Kim & Kim, 2019; Gormley et al., 2012; Richardson et al., 2021). This integration of physical and online scaffolding has given rise to blended learning, a teaching approach that combines traditional classroom teaching with online elements, allowing students to have greater autonomy in their learning experiences. Blended learning combines various approaches, such as web-enhanced learning with traditional teaching or integrating multiple delivery methods (Horn & Staker, 2017). Research indicates that blended learning leads to improved achievement, performance, and learning experiences (Azizan, 2010; Bazelais & Doleck, 2018; Dickfos et al., 2014; Wai & Seng, 2014), enhancing engagement, facilitating learning, and promoting the practical application of knowledge (Butz, 2014; Demirer & Sahin, 2013; Li et al., 2020; Schunk & Zimmerman, 2012; Shim & Lee, 2020). The reasons for choosing blended learning vary from educational effectiveness and accessibility to social interaction, personal empowerment, cost efficiency, and ease of modification (Osguthorpe & Graham, 2003).

In the development of language proficiency, peer scaffolding has emerged as a valuable approach for improving language skills and fostering active participation in the classroom (LaPointe & Reissetter, 2008; Rodríguez et al., 2022; Richardson et al., 2022). Peer scaffolding involves peers providing structured support, enabling students to effectively tackle tasks that may be challenging individually (Belland, 2014). Previous research has examined the effectiveness of different scaffolding techniques, including peer scaffolding, in enhancing language skills such as listening comprehension, reading comprehension, grammar proficiency, and speaking ability (Ahmadi Safa & Rozati, 2017; Ali Zarei & Rezadoust, 2020; Abune, 2019; Azir, 2019; Kusumawati, 2018; Mojarrabi Tabrizi et al., 2019). However, there is still a gap in the literature regarding the specific impact of peer scaffolding on speaking proficiency in advanced-level blended and traditional classes. This study aims to address this gap by investigating the implementation of peer scaffolding in both blended and traditional classes, with a particular focus on speaking proficiency. The research question guiding this study is as follows:

RQ1: What is the impact of peer scaffolding on the speaking proficiency of advanced-level EFL learners in blended learning environments compared to traditional classroom settings?

By exploring these research questions, this study aims to provide valuable insights into the impact of peer scaffolding on speaking proficiency in blended and traditional classes. Understanding the effectiveness of peer scaffolding in these instructional settings can inform

language educators and curriculum designers in optimizing language learning experiences. The results of this study have important implications for language teaching practice and contribute to the ongoing debate on innovative teaching methods. Additionally, this research may shed light on the advantages of blended learning and highlight the potential benefits of incorporating online scaffolding strategies in language instruction. The ultimate goal is to enhance and improve language teaching practices, particularly in the area of speaking proficiency, by harnessing the power of peer scaffolding in different instructional environments. In conclusion, this research aims to investigate the implementation of peer scaffolding to improve speaking skills in advanced-level blended and traditional classes. By examining the impact of peer scaffolding in these contexts, the research aims to contribute to the enhancement of language teaching practices, provide insights for curriculum designers, and offer valuable information to policymakers.

This study endeavors to address the gap in the literature by investigating the influence of peer scaffolding on speaking proficiency in advanced-level blended and traditional classes. The research questions focus on the impact of peer scaffolding on speaking proficiency in blended classes at an advanced level. By exploring these research questions, this study seeks to provide valuable insights into the effectiveness of peer scaffolding in both blended and traditional instructional settings. The finding of this study will have significant implications for language educators and curriculum designer, informing them about the optimal use of peer scaffolding to enhance language learning experiences

In conclusion, this research aims to contribute to the ongoing discourse on innovative teaching methods by examining the implementation of peer scaffolding in blended and traditional classes. The study seeks to uncover the specific impact of peer scaffolding on speaking proficiency at an advanced level. The results will inform language teaching practice, highlight the advantages of blended learning, and emphasize the potential benefits of integrating online scaffolding strategies. Ultimately, this research aims to improve language teaching practices, particularly in the area of speaking proficiency, by effectively utilizing peer scaffolding in diverse instructional environments.

2. Literature Review

Numerous studies have examined how scaffolding strategies impact language learning outcomes. For instance, *Khatib and Chalak (2022)* focused on four scaffolding strategies and their effect on Iranian EFL students' grammar knowledge and found that the group, which received scaffolding interventions, performed better than the control group, indicating the effectiveness of scaffolding in enhancing grammar proficiency. *Jafari et al. (2021)* examined the effects of scaffolding in the areas of technology, motivation, and metacognition on advanced EFL learners' speaking proficiency and found that integrating scaffolding with various language learning procedures had a positive impact on speaking proficiency. *Jafarigohar and Mortazavi (2017)* explored the impact of scaffolding models and modules on ESL learners' writing abilities and demonstrated positive effects on teaching and learning writing. *Ali (2015)* focused on the effect of scaffolding on the complexity and accuracy of narrative writing among EFL learners and observed significant improvements. *Naibaho (2019)* investigated the influence of scaffolding on learners' speaking achievements and highlighted

its effectiveness. Abune (2019) conducted a study examining how peer scaffolding can improve grammar proficiency and found positive outcomes. Hsieh (2016) examined different collaborative scaffolding approaches within an Internet-enhanced, face-to-face collaborative setting, emphasizing the importance of online resources. Janthon (2015) conducted a large-scale study of task-based blended learning and technical scaffolding and observed improvements in communication skills. Piamsai (2020) demonstrated the effectiveness of scaffolding in improving writing skills, focusing on the effect of scaffolding on the academic writing skills of incompetent students. Shirmhamadi and Salehi (2017) investigated the effects of scaffolding on reading comprehension in English for Specific Purposes (ESP) students and found scaffolding to be more effective.

Despite the existing research, there is a literature gap regarding the specific application of scaffolding techniques in blended learning environments. While scaffolding has been explored in traditional classrooms and online learning, further investigation is needed for its integration with blended learning. Blended learning, which combines in-person teaching with online elements, offers unique possibilities for incorporating scaffolding strategies and supporting language learners. Therefore, it is crucial to examine the effectiveness and potential benefits of scaffolding strategies within the context of blended language learning. This study aims to address this gap by examining the impact of scaffolding on language learning outcomes in a blended learning setting.

In investigating the implementation of peer scaffolding for speaking proficiency in blended versus traditional classes, several theoretical frameworks from second language acquisition can inform the study. Vygotsky's Zone of Proximal Development (ZPD) emphasizes the importance of social interaction and scaffolding in learning (Vygotsky, 1978). By providing support within learners' ZPD, teachers and peers can guide learners to higher levels of proficiency. Cognitive Load Theory (CLT) suggests that scaffolding can help manage cognitive load by breaking down complex tasks and gradually increasing difficulty (Sweller, 1988). This allows learners to focus their cognitive resources on the learning tasks. Sociocultural Theory emphasizes the social and cultural aspects of learning, highlighting how scaffolding occurs through collaborative problem-solving and dialogue (Lantolf & Thorne, 2006). Cognitive Apprenticeship theory emphasizes the role of expert modeling, guided practice, and feedback to support learners' skill development (Collins, Brown, & Newman, 1989). Interactionist approaches stress the significance of social interaction for language learning, where scaffolding occurs through meaningful interactions, corrective feedback, and negotiation of meaning (Long, 1996). By drawing on these theories, the study can provide a comprehensive understanding of the theoretical background behind scaffolding and its application in enhancing speaking proficiency in blended and traditional language classrooms.

3. Method

A true experimental research method was employed to align with the research questions. The control group received peer scaffolding in traditional face-to-face classes, while the experimental group received peer scaffolding in both online and face-to-face classes. The variables of interest were peer scaffolding and speaking proficiency in both face-to-face and

blended classes. The independent variable was peer scaffolding, and the dependent variable was speaking proficiency.

3.1. Participants

Initially, a group of 85 male and female students who were learning English was selected for the research. To ensure similarity among the participants, the Oxford Placement Test (OPT) was conducted, resulting in a final sample of 42 participants. These participants were randomly divided into two identical groups; the control group, which received scaffolding in traditional face-to-face classes, and the experimental group, which received peer scaffolding in blended classes. Both the blended and traditional classes consisted of 8 sessions per week over a period of one month. The researcher acted as the teacher for both types of classes.

3.2. Instruments and Materials

Several instruments and materials were used in this study. The OPT was employed to assess the participants' language proficiency and select intermediate-level students. The pre-test and post-test comprised speaking proficiency assessments, with the pre-test topic focusing on climate change and the post-test topic centered around COVID-19. The participants' speaking scores were evaluated on a modified 0- 100 scale, considering five components: grammar, vocabulary, comprehension, fluency, and pronunciation. The scoring categories followed the framework developed by [Brown and Abeywickrama \(2004\)](#).

3.3 procedure

The individuals included in the study were chosen from the Safir language institute located in Tehran. Initially, the OPT was administered to 85 advanced students in six classes, allowing them 20 minutes to complete the test. After selecting 42 participants based on the OPT results, they were divided into control and experimental groups. Pre-test scores were recorded for both groups to establish a baseline

The blended class had a total of eight sessions, and sessions 5 to 8 specifically focused on face-to-face speaking sessions guided by peers and the teacher. During these sessions, students in the blended class had the opportunity to practice their speaking skills with the support and guidance of their peers and the teacher.

On the other hand, the traditional class followed conventional classroom teaching methods without the use of online resources. The traditional class also engaged in speaking practice and received instruction on speaking techniques. However, the instruction and practice in the traditional class were conducted solely within the face-to-face classroom setting.

The treatment phase lasted for 8 sessions in both the blended and traditional classes. After completing the treatment sessions, both groups were invited to the Safir language institute on two separate Fridays for the final evaluation.

During the evaluation, the control group members in the traditional class were instructed by the teacher to deliver an oral presentation on the topic of COVID-19. The experimental group members in the blended class also delivered their presentations on the same topic, but within a two-minute timeframe. The oral presentations of the participants were scored using the oral competence categories developed by [Brown and Abeywickrama \(2004\)](#).

4. Results

The research aimed to explore the impact of peer scaffolding on speaking proficiency in both traditional and blended classes. Peer scaffolding was implemented in traditional classes for the control group, while the experimental group received peer scaffolding in blended classes. The results are as follow:

Table 1. The *descriptive statistics*

	Control	Experimental
Mean	16.4762	16.381
Variance	5.3923	4.712
Stand. Dev.	2.3221	2.1707
N	21	21

Descriptive statistics for both the control group and experimental group at the pre-test stage are shown in Table 1. The mean score for the control group is 16.4762, whereas the mean score for the experimental group is 16.381. In order to assess the significance of the difference between the means, a paired samples t-test was performed.

Table 2. *T-test results of estimation of magnitude of difference between the means*

T		0.1187
d.o.f		20
critical value		2.086
t < critical value	=>	no sig. diff.

The findings of the t-test are displayed in Table 2, presenting an estimate of the discrepancy between the means. The computed t-value is 0.1187, with 20 degrees of freedom. The critical value for significance is 2.086. Given that the absolute value of the calculated t is smaller than the critical value ($0.1187 < 2.086$), there is no statistically significant difference between the means.

Table 3. *Descriptive statistics*

	Control group	Experimental group
Mean	15.7143	19.3333
Variance	1.6327	0.5079
Stand. Dev.	1.2778	0.7127
N	21	21

The descriptive statistics for both the control and experimental groups at the post-test stage are presented in Table 3, after the implementation of peer scaffolding in both traditional and blended classes. The mean score for the control group is 15.7143, whereas the mean score for the experimental group is 19.3333. To determine the significance of the difference between these means, a t-test was performed, and the results are reported in Table 4.

Table 4. *T-test results of estimation of magnitude of difference between the means at post-test*

T		-11.8758
d.o.f		20
critical value		2.086
t > critical value	=>	there is sig. diff.

The findings in Table 4 indicate that the absolute value of the calculated t-value (11.8758) exceeds the critical value (2.086), signifying a statistically significant difference between the means.

Table 5. Comparison of pre-and post-examination of the control group before and after treatment

	Sample 1	Sample 2	Difference
Mean	16.4762	15.7143	0.7618999999999999
Standard deviation	2.3221	1.2778	1.874
N	21	21	42
Standard error	0.507	0.279	0.578
95% CI for mean	15.419 - 17.533	15.133 - 16.296	-0.407 - 1.931
DF	20	20	40
T			1.318
P-value			0.21
Tails			2-tailed

According to Table 5 which shows a comparison of the pre-test and post-test scores within the control group, the mean difference between these scores is 0.7619. The 95% confidence interval for this difference ranges from -0.407 to 1.931. The two-tailed p-value is 0.21, suggesting that there is no statistically significant difference in this context.

Table 6. Comparison of pre-and post-test of experimental group before and after treatment

	Pre-test	Post-test	Difference
Mean	16.381	19.3333	2.9523
Standard deviation	2.1707	0.7107	1.615
N	21	21	42
Standard error	0.474	0.155	0.498
95% CI for mean	15.393 - 17.369	19.01 - 19.657	1.945 - 3.96
DF	20	20	40
T			5.928
P-value			<0.001

According to Table 6, the mean difference between the pre-test and post-test scores is 2.9523. A t-test was conducted, resulting in a t-value of -5.928 and a p-value of <0.001.

The findings suggest that incorporating peer scaffolding in blended classes significantly enhances speaking proficiency among EFL learners. The experimental group displayed a substantial improvement in speaking proficiency from the pre-test (M = 16.381, SD = 2.1707) to the post-test (M = 19.3333, SD = 0.7107), $t(40) = 5.928$, $p < 0.001$. This outcome underscores the effectiveness of integrating peer scaffolding in blended learning environments to enhance speaking skills.

5. Discussion

The results of this research make a substantial contribution to the current body of literature on scaffolding techniques in language learning, specifically within the realm of blended learning. The findings of this study align with prior research that has emphasized the advantages of blended learning in improving language skills and fostering motivation (Kantisa & Sitthitikul, 2020; Ginaya et al., 2018). Blended learning provides students with a range of resources and opportunities for interaction, which can enhance their speaking ability and increase their motivation to learn. The integration of online components in blended courses allows for

flexibility, personalized learning, and access to various learning materials (Shand & Farrelly, 2018). The findings also align with the Complex Adaptive Blended Learning System theory, which emphasizes the dynamic interaction between learners, teachers, technology, content, and learning support (Alkaleel, 2019). This finding can be understood through the lens of Sociocultural Theory, which emphasizes the social and cultural aspects of learning and highlights how scaffolding occurs through collaborative problem-solving and dialogue (Lantolf & Thorne, 2006).

The findings also indicate that peer scaffolding is more effective in blended classes compared to traditional classes. Blended learning environments offer a combination of face-to-face instruction and online resources, allowing for greater access to scaffolding techniques and support. The online portion of blended courses provides students with additional learning opportunities, such as tutorials, games, and videos, that can facilitate their language development (Shand & Farrelly, 2018). This finding is supported by Teng and Zeng (2022), who found that blended learning had a remarkable effect on improving oral accuracy and fluency. The blended environment enhances the transition from external regulation to self-regulation and supports the encoding process of input (Teng & Zeng, 2022). This observation can be explained by theories such as Vygotsky's Zone of Proximal Development (Vygotsky, 1978), which emphasizes the importance of social interaction and scaffolding in learning, and Cognitive Load Theory (Sweller, 1988), which suggests that scaffolding helps manage cognitive load and allows learners to focus on learning tasks.

It is worth noting that while the results emphasize the effectiveness of peer scaffolding, both peer scaffolding and teacher-led scaffolding have the potential to enhance various aspects of language learning, including other language skills. Scaffolding interventions can be tailored to meet learners' specific needs and provide support in different areas of language development (Chen, 2020). The inclusion of theories such as Cognitive Apprenticeship theory (Collins, Brown, & Newman, 1989) and Interactionist approaches (Long, 1996) can further support the understanding of how scaffolding can facilitate language learning

In summary, this study contributes to the growing corpus of literature on scaffolding strategies in language learning and underscores the advantages of incorporating scaffolding techniques within blended learning environments. The findings support the use of peer scaffolding to enhance speaking proficiency and underscore the advantages of blended learning for language learners. By combining face-to-face instruction with online resources, educators can effectively support language learners and create an optimal learning environment. Future research could explore the influence of different scaffolding approaches on reading, writing, and listening skills within blended learning environments, drawing on theories such as Sociocultural Theory (Lantolf & Thorne, 2006) and Interactionist approaches (Long, 1996).

6. Conclusion

In conclusion, this study underscores the significance of incorporating scaffolding strategies in blended learning contexts and provides insights into the impact of peer scaffolding on EFL learners' speaking proficiency. The results contribute to our understanding of how scaffolding can be effectively implemented in language learning settings, offering practical implications for educators and curriculum designers.

Further research is encouraged to explore the application of scaffolding techniques in other language skills and investigate the long-term effects of blended learning on language learning outcomes. The findings indicate that peer scaffolding has a positive effect on speaking proficiency in blended classes. Moreover, this serves as an indicator of learners' positive perceptions regarding the roles of both scaffolding and blended classes. These findings suggest that instructors should recognize the usefulness of scaffolding in any form. Additionally, learners themselves should be aware that they can provide valuable insights to help their peers progress in different language levels. Instead of solely relying on monotonous face-to-face classes, policymakers and syllabus designers could consider dividing classes into blend of vertical and face-to-face interactions. This approach can enhance motivation, make learning more interesting, and reduce student stress. Considering that blended learning techniques are predominantly provided online, content producers and material developers are strongly encouraged to incorporate courses or lessons on blended learning. Furthermore, based on the concept of peer scaffolding, teachers can reduce their authority by allowing other learners to take responsibility for class activities.

This study has made a significant contribution to existing research by establishing the relationship between peer scaffolding and speaking proficiency in both traditional and blended EFL classes in Iran. However, there are several recommendations for future researchers to explore more complex issues. These recommendations include increasing the number of participants, employing additional data collection instruments, and extending the treatment period by incorporating more treatment sessions. Furthermore, researchers may wish to investigate the effects of other types of scaffolding on speaking proficiency across different language levels. Additionally, exploring how peer scaffolding influences student motivation in mastering all four language skills could be an interesting avenue for further research.

Moreover, future studies could delve into learners' perceptions of blended learning, particularly their experiences during the COVID-19 pandemic, to assess its overall benefits. Furthermore, since scaffolding encompasses various subtypes such as soft and hard scaffolding, further research is needed to measure the impact of each subtype on language skills in both blended and face-to-face classes. Another intriguing area of investigation could be examining the level of learner engagement under the influence of blended learning. Finally, considering that reading and writing have received less attention in the context of blended approaches, it would be worthwhile for researchers to explore these aspects in relation to blended learning.

In conclusion, the findings indicate that peer scaffolding has a positive impact on EFL learners' speaking proficiency, particularly in blended classes. These results are consistent with existing literature and highlight the benefits of blended learning in improving language skills and motivating students. The implications of this study suggest the need for awareness among instructors and learners regarding the effectiveness of scaffolding, as well as the potential for further improvements in syllabus design and instructional approaches. Future research should explore additional complexities and factors related to scaffolding, motivation, engagement, and specific language skills within blended learning contexts.

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