Journal of Language Horizons

Journal of Language Horizons, *Alzahra University*
Volume 9, Issue 1, Spring 2025, pp. 7-40
Research Article

Exploring the Impact of Computer-Supported Input Flooding and Input Enhancement on EFL Learners' Collaborative Oral Performance in Blended and Virtual Classes

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Received: 21/09/2023 Accepted: 17/06/2024

Abstract

In the era of advanced technology, language teaching has experienced a surge in the utilization of technology-oriented methods, such as blended and virtual instructions. Concurrently, the manipulation of input to enhance learners' acquisition has gained importance in various domains of language and teaching. Two prominent approaches in this regard are input enhancement (IE) and input flood (IF). This study aimed at examining the effect of these methods on the collaborative oral performance of English as a Foreign Language (EFL) learners in the context of blended and virtual classes. Using a quasi-experimental research design, four groups were formed: IE in blended class (BC), IE in virtual class (VC), IF in BC, and IF in VC groups. The study involved fifty-one EFL elementary level students with homogenous English proficiency, randomly assigned to the groups. Pre-test interviews were conducted using six open-ended questions and assessed by two raters. The participants then received sixteen instructional sessions, delivered entirely in virtual environments for VC groups using Shad application, and in a combination of virtual and physical environments for BC groups. IE groups received instruction based on manipulated input utilizing techniques while IF groups were exposed to repeated instances of target forms in written and oral formats. Following the instructional period, a posttest interview was administered. The results, analyzed through repeated measures ANOVA, revealed the positive impact of IE and IF in both BC and VC groups on EFL learners' collaborative oral performance. Furthermore, the BC groups exhibited higher performance compared to the VC groups. These findings contribute to the understanding of effective collaborative language teaching practices, especially in computer-supported environments.

Keywords: blended class (BC), blended instruction (BI), collaborative learning, input enhancement (IE), input flood (IF), oral performance, virtual class (VC), virtual instruction (VI).

How to Cite:

Khademi, M; Hemmati, F; Khodabandeh, F; Sadat Mousavi, M (2025), Exploring the Impact of Computer-Supported Input Flooding and Input Enhancement on EFL Learners' Collaborative Oral Performance in Blended and Virtual Classes, *Journal of Language Horizons*, 9(1), 7-40.

homepage: http://lghor.alzahra.ac.ir (https://doi.org/10.22051/lghor.2024.45046.1856)

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Introduction

In recent years, technology-driven teaching methods have gained significant prominence in the realm of language instruction, a trend that has been accelerated by the global impact of the COVID-19 pandemic. Blended instruction (BI) and virtual instruction (VI) have emerged as leading approaches in this educational shift. Blended instruction combines traditional face-to-face teaching with technology-mediated methods (Huang et al., 2022), while virtual instruction involves online interactions between instructors and students through video conferencing software during scheduled class hours (Qiu et al., 2024).

Previous research has demonstrated the advantages of BI and VI in language teaching. Studies by Li et al. (2020) and Thai et al. (2019) underscored the positive effects of BI on the learning performance of graduate and undergraduate students. Similarly, Aghajani and Adloo (2018), Manegre and Sabiri (2020), and Shahzad et al. (2020) highlighted the benefits of VI in enhancing learners' writing skills, attitudes, as well as the perceptions of both teachers and students. However, contradictory findings have also surfaced, with Mali and Lim (2021) and Sabah (2020) identifying disadvantages associated with BI, including students' perceptions, attitudes, motivations, and teaching competencies. Similarly, studies by Erümit (2021), Fandino et al. (2019), and Shahzad et al. (2020) reported varying impacts of VI on students' behaviors and motivation in language teaching.

Notably, BI and VI find application in various language teaching domains, including language learning motivation (Thai et al., 2019), writing skills (Aghajani & Adloo, 2018), learners' attitudes (Shahzad et al., 2020), and oral proficiency (Namaziandost et al., 2020). As pointed out by Menggo et al. (2019), BI and VI can also effectively teach speaking skills to second language learners, a crucial and often challenging aspect for language learners (Chou, 2018). This extends to the proficiency of language learners in speaking (e.g., Dabiri & Pourhosein Gilakjani, 2019; Namaziandost et al., 2020; Sadeghi & Richards, 2015; Yavari & Shafiee, 2019).

In addition to the integration of technology-based methods like BI and VI to enhance language learning, the manipulation of input has gained considerable importance in second language acquisition. Input enhancement (IE) and input flood (IF) are two methods used to manipulate input (Sharwood Smith, 2016). IF involves

saturating learners' input with a target form, making it noticeable and potentially facilitating acquisition (Wong, 2005). On the other hand, IE refers to the deliberate manipulation of input that learners are exposed to, aimed at inducing learning (Sharwood Smith, 2016).

While some studies have demonstrated the positive effects of IE (e.g., Chung & Revesz, 2021; Loewen & Sato, 2018; Perez, 2022; Peterson, 2021), others have highlighted the benefits of IF (e.g., Martoccio, 2017; Namaziandost et al., 2020). However, there are also studies that reported negative effects or the lack of significant effects for both IE (e.g., Ghavamnia et al., 2014; Liu et al., 2021; Loewen, 2018; Showalter, 2020) and IF (e.g., Bakhshandeh & Jafari, 2018; Hirakawa et al., 2018; Szudarski & Carter, 2014).

This study uniquely explores the intersection of these elements by examining the impact of computer-supported input flooding and input enhancement on the collaborative oral performance of English as a Foreign Language (EFL) learners in both blended and virtual class settings. While the existing body of research has delved into the impact of BI and VI on various aspects of language learning, a critical gap remains in understanding how these methods specifically influence collaborative oral performance in English as a Foreign Language (EFL) learners. This study addresses the identified gap by explicitly investigating the collaborative oral performance of EFL learners in the context of BI and VI. The need for this investigation arises from the acknowledgment that collaborative oral proficiency represents a unique and essential dimension of language acquisition that may respond differently to technology-supported instruction compared to other language skills. The originality of this study lies in its intersectional exploration of computer-supported input flooding (IF) and input enhancement (IE) within the context of collaborative oral tasks. While previous research has separately examined the effects of BI, VI, IF, and IE in various language teaching contexts, the concurrent investigation of these elements is a novel aspect that sets this study apart. By focusing on collaborative oral performance, the study contributes to the broader understanding of language acquisition in computer-supported learning environments, offering insights into effective instructional strategies for EFL learners. Moreover, the study's originality extends to the application of IF and IE specifically in the domains of blended and virtual classes. Existing literature often

generalizes the effects of these techniques without considering the distinct learning environments they are applied in. This study seeks to fill this void by providing a context-specific analysis, thereby offering practical implications for educators and curriculum designers working in blended and virtual language learning settings. In line with these considerations, the study poses the following research questions:

1. What is the effect of IF (input flood) in VC (virtual class) on EFL learners' collaborative oral performance?
2. What is the effect of IF (input flood) in BC (blended class) on EFL learners' collaborative oral performance?
3. What is the effect of IE (input enhancement) in VC (virtual class) on EFL learners' collaborative oral performance?
4. What is the effect of IE (input enhancement) in BC (blended class) on EFL learners' collaborative oral performance?
5. What are the differences in the potential effects of IE in BC, IE in VC, IF in BC, and IF in VC on EFL learners' collaborative oral performance?

By exploring these research questions, this study aims to provide valuable insights into the impact of computer-supported input flooding and input enhancement on collaborative oral performance within blended and virtual language learning environments. The findings will contribute to a deeper understanding of how these techniques can be effectively integrated into technology-supported language instruction and promote collaborative learning outcomes among EFL learners.

Literature review

In this section, a review of previous research studies related to blended instruction (BI), virtual instruction (VI), input flood (IF), and input enhancement (IE) is presented, along with the theoretical frameworks that underpin these techniques and strategies. The literature review is divided into four separate sections.

Blended Instruction (BI)

Blended Instruction (BI) has emerged as a highly practical teaching methodology that leverages the advantages of both virtual and face-to-face instruction (Dousti & Amirian, 2023). It maximizes the benefits of these

instructional approaches, offering flexibility and enriched learning opportunities (Li et al., 2020). Chen and Yao (2016) described BI as a promising alternative to traditional e-learning. The continued interest in BI, as highlighted by Boelens et al. (2017), is due to its integration of online and face-to-face elements, optimizing the overall learning experience. Thai et al. (2019) argued that BI, with its diverse delivery modes, has a positive impact on learners. Moreover, Harahap et al. (2019) found that BI effectively enhances students' learning achievement and science process skills. Lapitan et al. (2021) reported positive outcomes when implementing BI in undergraduate education, employing a five-component blended learning strategy. Learners demonstrated improvement and expressed satisfaction with this approach. Fisher et al. (2018) also found that BI positively influenced learners' perceptions of engagement, performance, and satisfaction. Nevertheless, Wong et al. (2020) observed no significant difference in achievement between the experimental group trained with BI and the control group, despite noting a positive effect of BI on learners' autonomy and motivation. In a mixed-method study, Mali and Lim (2021) explored students' perceptions of BI and face-to-face instruction and discovered that learners preferred BI during the COVID-19 pandemic and face-to-face instruction both before and after the pandemic.

The mixed findings in the literature suggest that the effectiveness of BI is contingent on various factors, including contextual elements and learner preferences. The contrasting results prompt a deeper exploration into the conditions under which BI proves most beneficial and the factors that may influence its impact on learners.

Theoretical Framework. BI aligns with several theories from second language acquisition that emphasize the importance of meaningful interaction and exposure to comprehensible input. According to Vygotsky's sociocultural theory (1978), language learning is facilitated through social interaction and collaboration (Boelens et al., 2017). BI provides opportunities for learners to engage in both face-to-face and virtual interactions, fostering communication and language development. Krashen's Input Hypothesis (1985) highlights the role of comprehensible input in language acquisition (Thai et al., 2019). BI can enhance input delivery by combining various instructional materials and modes, ensuring learners receive appropriate linguistic input that aids their oral performance. The concept of the Zone of Proximal Development (ZPD) developed by Vygotsky (1978) suggests that learners

can benefit from instruction that is slightly beyond their current level of competence (Harahap et al., 2019). BI allows for differentiation and personalized instruction, catering to individual learners' needs and providing challenging yet attainable language tasks. By integrating these theoretical perspectives, BI offers a pedagogical framework that supports language learning and oral performance in blended classes. By integrating these theoretical perspectives, BI not only offers a pedagogical framework but also prompts consideration of the socio-cultural and cognitive aspects that contribute to effective language learning in blended settings.

Virtual Instruction (VI)

Virtual Instruction (VI) empowers learners to take control of their learning path and exercise autonomy (Herrador-Alcaide et al., 2019). However, effective utilization of VI requires learners to possess specific skills. Huang et al. (2018) found that virtual learning evokes positive emotions and enhances intrinsic motivation among learners. VI also enables language learners to transcend the limitations of physical space and time (Manegre & Sabiri, 2020). Aghajani and Adloo (2018) implemented a virtual teaching method for developing writing skills and observed its positive impact on learners' performance. Shahzad et al. (2020) examined the effects of virtual teaching on second language acquisition (SLA) and identified both advantages and disadvantages of VI in this context. In his research, Erümit (2021) concluded that while VI offers benefits, it can present challenges in class management for teachers and a lack of exam preparation on the part of learners. Borba et al. (2018) referred to Tikhomirov's notion of reorganization of thinking (1981) as a theoretical framework for VI. This theory suggests that computers, with their multimodal environments and diverse discourses, offer new ways of language that differ from oral and written forms, potentially impacting cognition and reorganizing thinking. Borba et al. (2018) also cited Levy's theory of collective intelligence (1993), which discusses the distributed intelligence that can be shared and coordinated among individuals through new forms of communication, particularly in virtual environments. The dual nature of VI, with its benefits and challenges, prompts a critical examination of its implementation, considering the intricate interplay between learner autonomy, motivation, and cognitive processes.

Theoretical Framework. VI aligns with theories from second language acquisition that emphasize learner autonomy, motivation, and cognitive

reorganization. In the context of VI, the theory of constructivism is relevant, as it suggests that language learners actively construct knowledge and rely on their own observations and data analysis (Tsai, 2019). VI provides learners with the opportunity to explore and interact with language independently, promoting autonomy in the learning process. The theory of distributed intelligence by Levy (1993) also applies to VI, as it highlights the collaborative and coordinated nature of communication in virtual environments. Learners can benefit from collective intelligence and shared knowledge through online interactions. Additionally, Tikhomirov's notion of reorganization of thinking (1981) suggests that VI's multimodal environments and diverse discourses offer new ways of language that can impact cognition and reshape thinking. These theoretical perspectives provide a foundation for understanding the potential effects of VI on Iranian EFL learners' oral performance in blended and virtual classes.

Input Enhancement (IE)

In the realm of language teaching, a prevailing consensus exists that exposing learners to a substantial amount of input leads to improved language learning outcomes (Chung & Revesz, 2021). Input Enhancement (IE) stands as a pedagogical approach that subtly directs learners' attention towards target language forms through meaningful activities (Liu et al., 2021). Chung and Revesz (2021) effectively applied the IE technique in teaching reading skills, noting its positive impact. Malone (2018) conducted an investigation into aural IE in vocabulary learning and reported its positive effects on vocabulary acquisition. Similarly, studies by Perez et al. (2018) and Peters (2019) have demonstrated the positive influence of IE on vocabulary learning. It is noteworthy that Ghavamnia et al. (2014) conducted a comparative analysis of various studies related to IE and other input manipulation techniques, uncovering discrepancies among findings attributed to terminological inconsistencies and methodological variations. Similarly, Szudarski and Carter (2014) noted the inconclusive nature of empirical IE research studies due to noticeable methodological variations. Liu et al. (2021) also observed mixed findings among studies on IE. Loewen (2018) pointed out that despite its potential effects, the implicit structure of IE introduces ambiguity. The mixed findings and methodological variations suggest that the effectiveness of IE is

complex and may depend on various factors, emphasizing the need for further exploration and clarification.

Theoretical Framework. As a theoretical foundation for IE, Chung and Revesz (2021) referenced Sharwood Smith's input enhancement hypothesis (1993), which suggests that teachers selectively highlight salient linguistic features to facilitate their acquisition by learners. Ghavamnia et al. (2014) and Szudarski and Carter (2014) mentioned Schmidt's noticing hypothesis (1993) as another theoretical basis for IE. According to this hypothesis, learners cannot internalize linguistic features unless they consciously notice them in the input, thereby transforming input into intake.

Input Flood (IF)

Input Flood (IF) represents an instructional approach where explicit rules or directions related to the target language form are deliberately withheld during the teaching process (Indrarathne et al., 2018). It amplifies the teaching effect through artificially engineered frequency (Szudarski & Carter, 2014) while maintaining the flow of communication (Benati & Schwieter, 2019). Benati (2021) referred to studies demonstrating the positive impact of IF on teaching passive voice and adverbs of place. Namaziandost et al. (2020) applied IF in teaching vocabulary and reported its positive effects. Benati and Schwieter (2019) suggested that IF is effective in teaching what is possible in a language but less effective in teaching what is not possible. However, Hirakawa et al. (2018) employed IF in teaching adjective order and found no significant positive effects. The varying outcomes in IF studies necessitate an examination of the contexts and conditions under which IF is most effective, shedding light on its limitations and potential applications.

Theoretical Framework. Regarding theoretical foundations, IF can be associated with theories such as Ellis and Wulff's emergentist and usage-based theories (2015) and Schmidt's noticing hypothesis (1993). Emergentism posits that language and its properties emerge over time through the interaction of cognitive mechanisms and input, primarily in an implicit manner, with input frequency playing a role in enhancing it. Usage-based theories propose that language structure emerges from language use, with input frequency playing a crucial role. Tsai (2019) highlighted constructivist learning theory and the noticing hypothesis as relevant theoretical frameworks for IF. Constructivism suggests that language learners

actively construct knowledge rather than passively receiving it, and they are more likely to transfer and acquire knowledge through their own observation and data analysis rather than relying solely on information transmitted by a teacher. Hence, the role of input is essential in constructivist learning.

In conclusion, considering the inconsistencies among the results of various research studies on BI, VI, IE, and IF, it is imperative to undertake a comprehensive study comparing IE and IF in the context of BC and VC. Such a study could shed light on the potential benefits of employing input-manipulated procedures in BC and VC. Additionally, there is a paucity of research on oral performance utilizing a combination of BI, VI, IE, and IF, underscoring the need for further investigation in this domain.

Method

Research Design

The primary objective of this study was to investigate the influence of Computer-Supported Input Flooding (IF) and Input Enhancement (IE) on the collaborative oral performance of EFL language learners in both Blended Context (BC) and Virtual Context (VC). To achieve this objective, a quantitative quasi-experimental research design was employed. The study incorporated four independent variables: IF, IE, BC, and VC, while the dependent variable was the collaborative oral performance of EFL language learners. Furthermore, to account for potential sources of variation, nationality, gender, age, and language proficiency were considered as control variables. The research design involved the administration of a pre-test before the initiation of the instructional treatments. Subsequently, each group underwent their respective treatment interventions. Finally, a post-test assessment was conducted upon completion of the instructional courses.

Participants

At the commencement of this study, a total of ninety-eight eighth-grade Iranian male learners, hailing from Shahed and Alam-e-Tabatabei high schools in Khomein City, participated in the Cambridge Oral Placement Test. To ensure the validity of inter-rater assessments, two interviewers conducted interviews with the participants. Based on the interview results, it was determined that the selected

subjects possessed an elementary proficiency level in English. From the initial pool of participants, fifty-one individuals whose scores fell within one standard deviation above and below the mean were selected to partake in the study. Subsequently, these participants were assigned to four distinct groups: (1) IE in BC group, (2) IE in VC group, (3) IF in BC group, and (4) IF in VC group. Each group, with the exception of the IE in the BC group, consisted of thirteen participants, while the remaining group comprised twelve participants. All groups received instruction from the same teacher.

The IF in the BC group received treatment in both face-to-face and virtual classes over a span of sixteen sessions, whereas the IF in the VC group exclusively received treatment in the virtual class for the same duration. Similarly, the IE in the BC group underwent treatment in both face-to-face and virtual classes, while the IE in the VC group exclusively received their treatment in the virtual class, also spanning sixteen sessions.

Materials and Instruments

Cambridge Oral Placement Test. To ensure the formation of homogeneous groups, the study employed the Cambridge Oral Placement Test, a globally recognized international assessment tool. This test has consistently demonstrated high levels of validity and reliability in language assessment (Grossmann, 2010). The test is aligned with the proficiency levels defined by the Common European Framework of Reference for Languages (CEFR) and consists of three distinct question banks that categorize language learners into six different proficiency levels. For the purposes of this study, the first question bank, specifically designed for starter and elementary levels, was utilized. This choice was made as it closely aligned with the content covered in the participants' school books.

Teaching Materials. The teaching materials employed in this study comprised two components. The primary resource was the participants' school book, "Prospect Two" (Alavi Moghadam et al., 2021), which is a standard instructional material used throughout the academic year in Iranian schools. Additionally, we utilized the corresponding workbook that accompanies the main school book. Both the main book and its workbook are comprehensive and cover various aspects of language learning, with a specific emphasis on developing speaking skills. For the purpose of this research, we selectively focused on specific sections and exercises

related to speaking in both the main book and workbook. This strategic selection aimed to align the teaching materials with the research objective of enhancing oral proficiency among participants.

Pre-test and Post-test. For both the pre-test and post-test, six questions mirroring the starter/elementary level of the Cambridge Oral Placement Test were selected. The choice of these questions was guided by their alignment with the topics and content covered in the participants' school book, "Prospect Two" (Alavi Moghadam et al., 2021). Two raters orally administered these questions to each participant, recording their responses for subsequent data analysis. The pre-test and post-test were designed to minimize potential peer pressure or testing effects by testing all participants on the same day, in separate, isolated settings.

Following one month of treatment, the same set of six questions from the pre-test was presented to the participants as a post-test. The use of identical questions enhanced the test's reliability and facilitated the comparison of results between the pre-test and post-test phases. Importantly, participants were unaware of the similarity between the questions. As in the pre-test, both raters were present during the post-test, which was administered individually for each participant in isolated settings. Voice recordings were obtained from all participants. To minimize any potential maturation effects, the post-test was administered one week after the completion of the treatment. The inclusion of all participants throughout the treatment and in both the pre-test and post-test helped to control for attrition effects. Moreover, the reliability of the pre-test and post-test was found to be satisfactory, with Cronbach's alpha coefficients of 0.89 and 0.81, respectively.

Shad Application. To facilitate virtual classes for the IF and IE in VC groups and the virtual component for the IF and IE in BC groups, the researchers opted to use the Shad Application version II. This application was the official platform endorsed by the Ministry of Education of the Islamic Republic of Iran during the COVID-19 pandemic for virtual instruction across all Iranian schools, including primary and high schools. Moreover, participants had prior experience with the application, having used it for several months before the study. This prior familiarity engendered a sense of comfort and mastery among the participants. Furthermore, the Ministry of Education provided free internet access for this application, a crucial consideration for the participants.

The Shad application offered several advantages, including an attendance list, polling capabilities, and various testing methods, making it highly suitable for classroom use. Additionally, it provided a combination of visual, auditory, and textual teaching approaches, enhancing its versatility and convenience. Given these robust reasons, the researchers selected the Shad application for the virtual instruction component (VI) of the study in all four groups.

Ethical Considerations

The study prioritized ethical considerations by obtaining informed consent from participants, ensuring confidentiality, allowing voluntary withdrawal, and minimizing stress during assessments.

Treatment Sessions

In designing the treatment sessions for the study, we integrated instructional practices that drew on both theoretical and empirical foundations. The input enhancement (IE) treatments in blended classes (BC) and virtual classes (VC) groups were inspired by established approaches emphasizing the benefits of making target language forms more salient through techniques like bolding, capitalizing, coloring, italicizing, and underlining (Chung & Revesz, 2021; Perez et al., 2018). These practices have been linked to heightened language awareness and improved learning outcomes. Similarly, the input flood (IF) treatments were informed by pedagogical theories supporting the effectiveness of extensive exposure and repetition in language learning (Benati, 2021; Namaziandost et al., 2020). The logic behind the selection of these practices was to provide learners with diverse language input and foster collaborative oral performance. While the specific treatment designs were crafted by the researchers based on these theoretical and empirical considerations, it is essential to note that this study contributes to the evolving landscape of instructional methodologies for language learning.

The Treatment of the IE in the BC Group. The treatment for the Input Enhancement (IE) in Blended Classes (BC) group was structured to encompass both virtual and physical instructional components. The virtual phase of the treatment was conducted on Sundays and Wednesdays, spanning eight sessions over four weeks, with sessions running from 20:30 to 22:00. Subsequently, after the completion of the virtual phase, the physical component of the treatment commenced, taking place on even days and spanning eight sessions. These face-to-

face sessions occurred from 13:00 to 14:30. In total, the treatment for this group consisted of sixteen sessions, combining virtual and physical instruction, and extended over approximately two months. Virtual sessions were conducted utilizing the Shad application, while the face-to-face sessions were held at the participants' school premises. The lesson content was closely aligned with the topics covered in their school book.

Each session commenced with an introduction to the lesson's topic, followed by the presentation of essential vocabulary related to that topic. Patterns and illustrative examples were provided to familiarize the learners with the subject matter. Various collaborative tasks, such as storytelling, interviewing, and information gap activities, centered around the target lesson's topic, were assigned to small groups consisting of two to four students. The primary emphasis during the sessions was placed on active participation from the learners. This instructional format was consistent across both the physical and virtual sessions, with slight adaptations to accommodate the different modes of instruction.

As the treatment for this group centered on the utilization of Input Enhancement (IE) techniques, various strategies, such as bolding, capitalizing, coloring, italicizing, and underlining, were employed to highlight and emphasize target language forms, rendering them more conspicuous to the learners. These techniques were strategically utilized to direct learners' attention to specific linguistic features and facilitate their recognition and internalization of the target language forms. The IE techniques were effectively incorporated into the materials, texts, or prompts employed during the speaking tasks and activities.

Fourteen sessions adhered to this instructional structure, which prominently featured the application of Input Enhancement techniques. The remaining two sessions were dedicated to conducting pre-test and post-test assessments aimed at evaluating the impact of the input flooding technique on the participants' development of speaking skills. By incorporating input flooding and leveraging Input Enhancement techniques, the treatment administered to the BC group aimed to provide learners with ample language input and enhance their collaborative oral performance in both blended and virtual class settings.

The Treatment of the IE in the VC Group. The treatment sessions for the Input Enhancement (IE) in Virtual Classes (VC) group were exclusively conducted

in a virtual format, utilizing the Shad application. These sessions were scheduled for Sundays and Wednesdays, spanning sixteen sessions over eight weeks, approximately equivalent to two months in duration. The lesson topics were aligned with those of the previous group. The lesson plan for this group closely mirrored the structure employed in the IE in BC group, with slight adaptations to suit the virtual learning environment.

Each session in the VC group initiated with an introductory segment pertaining to the topic of the day. Subsequently, essential vocabulary related to the topic was introduced, along with associated practice exercises. Comprehensive explanations concerning the new lesson were provided, and students were then assigned tasks designed to incorporate the target language forms. These tasks made use of techniques such as bolding to highlight specific linguistic features. To ensure active participation and engagement, the instructor intermittently posed questions and leveraged features offered by the Shad application, such as polling or multiple-choice questions.

Fourteen sessions adhered to this instructional structure, placing a significant emphasis on the application of Input Enhancement techniques. The remaining two sessions were dedicated to conducting pre-test and post-test assessments, evaluating the impact of the input enhancement technique on participants' collaborative oral performance.

The Treatment of the IF in the BC Group. The treatment sessions for the Input Flood (IF) in the Blended Classes (BC) group, much like the IE in the BC group, encompassed both virtual and physical instructional components. The virtual segment of the treatment was conducted on Saturdays and Tuesdays, spanning eight sessions over four weeks, with sessions scheduled from 20:30 to 22:00. Subsequently, the physical component of the treatment commenced, continuing for eight sessions on even days, taking place from 15:00 to 16:30. In total, the treatment for this group comprised sixteen sessions, combining both virtual and physical instruction, and extended over approximately two months. Virtual sessions were conducted via the Shad application, while the face-to-face sessions were held at the participants' school premises. The lesson topics corresponded with those covered in their school book, aligning with the topics employed in the other treatment groups.

The session structure closely mirrored that of the IE in BC group,

commencing with an introduction to the topic, followed by the presentation of essential vocabulary, and the provision of patterns and examples designed to acquaint the learners with the subject matter. Given the treatment's focus on the utilization of IF, significant emphasis was placed on the repetition of target language forms. Repetition was incorporated in various formats, encompassing oral and written exercises. The instructor aimed to integrate a high degree of repetition of target forms through diverse instructional approaches. In physical classes, this involved the use of audio files, reading aloud, and embedding target forms within various tasks. In virtual classes, repetition was primarily facilitated through the use of audio files and integrating target forms into tasks. Due to constraints related to the quality of live communication via the Shad application, the practice of reading aloud was reduced in virtual sessions. Fourteen sessions adhered to this structure, with two additional sessions designated for conducting pre-test and post-test assessments.

The Treatment of the IF in the VC Group. The treatment sessions for the Input Flood (IF) in Virtual Classes (VC) group were exclusively conducted in a virtual format, leveraging the Shad application. These sessions were scheduled for Saturdays and Tuesdays, spanning sixteen sessions over eight weeks, approximately equivalent to two months. The lesson topics were aligned with those employed in the other treatment groups. The structure of each session closely mirrored that of the IF in BC group, commencing with an introductory segment focusing on the topic of the day, followed by the presentation of new words and sentences relevant to the lesson. Subsequently, students engaged in tasks designed to incorporate target forms. Given that the treatment for this group was centered around the IF technique, the repetition of target language forms in vocal or visual forms played a pivotal role in the activities and tasks.

The instructor actively facilitated the repetition of target forms through various methods, including reading aloud (whenever the connection quality permitted direct communication), the incorporation of tasks enriched with target forms, the utilization of audio files, and the provision of texts to the learners. Given that all sessions were conducted through the Shad application and were focused on IF, the teacher proactively monitored and encouraged student participation. This was achieved through regular questioning and the use of polling or multiple-choice questions within the application, effectively reinforcing the use of target language forms.

Data Analysis

Overview

The present study was undertaken in order to investigate the effect of input enhancement (IE), and input flooding (IF) on Iranian EFL learners' oral performance in virtual (VI) and blended (BI) instructions. The dada were analyzed through Repeated Measures ANOVA which assumes normality of data, homogeneity of variances of groups, homogeneity of covariances matrices, and sphericity. The assumptions are discussed below.

Testing Assumptions

As it was mentioned above, Repeated Measures ANOVA has four assumptions. First, it requires the normality of the data. The normality of pretest and posttest of oral performance was probed using skewness and kurtosis indices and their ratios over the standard errors (Table 1). As noted by Field (2018, p 345-46), the ratios of skewness and kurtosis over their standard errors are analogous to Z-scores, which "can be compared against values that you would expect to get if skew and kurtosis were not different from 0 (see Section 1.8.6). So, an absolute value greater than 1.96 is significant at $p < 0.05$, above 2.58 is significant at $p < 0.01$, and above 3.29 is significant at $p < 0.001$. Since the computed ratios (Table 1) were lower than ± 1.96, it was concluded that the pretest and posttest of oral performance did not show any significant deviation from normality. It should also be noted that Abu-Bader (2021) has also supported the criteria of ±1.96. Moreover, the IBM SPSS Documentation[1] suggested the criteria of ± 2.

Table 1

Skewness and Kurtosis Indices of Normality

Group		Skewness			Kurtosis		
		Statistic	Std. Error	Ratio	Statistic	Std. Error	Ratio
IE in BI	Pretest	.014	.661	0.02	.522	1.279	0.41
	Posttest	-1.198	.661	-1.81	.617	1.279	0.48
IE in VI	Pretest	-.890	.637	-1.40	.080	1.232	0.06
	Posttest	-.708	.637	-1.11	-1.015	1.232	-0.82
IF in BI	Pretest	-.586	.637	-0.92	-.067	1.232	-0.05
	Posttest	-.911	.637	-1.43	1.287	1.232	1.04
IF in VI	Pretest	.743	.637	1.17	.557	1.232	0.45
	Posttest	-.470	.637	-0.74	-1.456	1.232	-1.18

1. https://www.ibm.com/docs/en/spss-statistics/25.0.0?topic=summarize-statistics

Second, Repeated Measures ANOVA also requires that the groups should enjoy homogenous variances on pretest and posttest of oral performance. The non-significant results of the Levene's tests (Table 2) indicated that the groups enjoyed homogenous variances on pretest ($F (3, 43) = .747$, $p > .05$), and posttest ($F (3, 43) = .622$, $p > .05$) oral performance.

Table 2

Levene's Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Pretest	Based on the Mean	.908	3	43	.445
	Based on the Median	.747	3	43	.530
	Based on Median and with adjusted df	.747	3	39.171	.531
	Based on the trimmed mean	.846	3	43	.476
Posttest	Based on the Mean	1.473	3	43	.235
	Based on the Median	.622	3	43	.605
	Based on Median and with adjusted df	.622	3	25.795	.607
	Based on the trimmed mean	1.263	3	43	.299

Third, Repeated Measures ANOVA assumes that the correlations between pretest and posttest of oral performance are roughly equal across the groups, i.e., homogeneity of covariance matrices. The non-significant results of the Box's Test (Box's $M = 11.74$, $p > .001$) indicated that the assumption of homogeneity of covariance matrices was retained. It should be noted that the Box's Test has to be reported at .001 levels (Field, 2018; Pallant, 2016; Tabachnick & Fidell, 2014).

Table 3

Box's Test of Equality of Covariance Matrices

Box's M	11.741
F	1.194
df1	9
df2	20619.230
Sig.	.293

Moreover, finally, Repeated Measures ANOVA requires that the differences between any two pairs of dependent variables should enjoy homogenous variances. The Sphericity Test should not be mixed with Levene's Test. The latter

compares the variances of the groups, while the Sphericity Test compares the variances of the differences between any two tests (dependent variables). To run the Sphericity Test, at least three tests are required (Field, 2018). Since the present study included two dependent variables, the Sphericity Test failed to produce any probabilities (Table 4).

Table 4

Mauchly's Test of Sphericity

Within-Subjects Effect	Mauchly's W	Approx. Chi-Square	df	Sig.	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
Tests	1.000	.000	0	.	1.000	1.000	1.000

The present study includes one independent variable, which shows the four groups participating in this study. It also includes two dependent variables: pretest and posttest of oral performance. Moreover, finally, there is a Within-Subject Factor representing the two tests administered in this study. The simple effect analysis, whose outputs are similar to post-hoc comparison tests, as defined by Field (2018) enables researchers to investigate the effect of levels of one independent variables within the levels of another independent variable; or within the levels of a Within-Subject Factor. The simple effect analysis enabled the researcher to compare each group's mean improvement from pretest to posttest. Without simple effect analysis, the researcher had to run four separate Paired-Samples t-tests; hence, increasing the error rate as noted by Field (2018). After this brief introduction to the analyses run on the data collected in this study, the main results are discussed below.

Table 5 shows the four groups' means on pretest and posttest of oral performance. The IF in BI (M = 55.77, SE = 1.54), IE in VI (M = 56.25, SE = 1.48), IF in BI (M = 54.00, SE = 1.48), and IF in VI (M = 55.00, SE = 1.48) had fairly close means on pretest of oral performance. However, IE in BI (M = 71.59, SE = 1.41) had the highest mean on posttest of oral performance. This was followed by IF in BI (M = 70.16, SE = 1.35), IF in VI (M = 61.33, SE = 1.35), and IE in VI (M = 60.75, SE = 1.35).

Table 5

Descriptive Statistics for Pretest and Posttest of Oral Performance by Groups

Group	Tests	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
IE in BI	Pretest	55.773	1.547	52.653	58.892
	Posttest	71.591	1.410	68.746	74.435
IE in VI	Pretest	56.250	1.481	53.263	59.237
	Posttest	60.750	1.350	58.027	63.473
IF in BI	Pretest	54.000	1.481	51.013	56.987
	Posttest	70.167	1.350	67.443	72.890
IF in VI	Pretest	55.000	1.481	52.013	57.987
	Posttest	61.333	1.350	58.610	64.057

Table 6 shows the results of Between-Subject Effects; i.e., the effect of types of treatments on the overall performance of participants on the pretest and posttest of oral performance. The results ($F (3, 43) = 5.13$, $p < .05$, $p\eta^2 = .264$ representing a large effect size[1]) indicated that there were significant differences between the four groups' means on the overall pretest and posttest of oral performance. These results cannot answer any of the null-hypotheses due to the fact that it did not distinguish between the four groups' performance on pretest and posttest of oral tests separately.

Table 6

Tests of Between-Subjects Effects for Pretest and Posttest of Oral Performance by Groups

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	344802.694	1	344802.694	10421.471	.000	.996
Group	509.390	3	169.797	5.132	.004	.264
Error	1422.689	43	33.086			

The results of Within-Subjects Effects (Table 7) indicated that there was a significant difference between overall mean scores on pretest and posttest of oral performance disregarding group membership ($F (1, 43) = 177.82$, $p < .05$, $p\eta^2 = .805$, representing a large effect size). The results also indicated that there was a significant interaction between the groups and tests ($F (3, 43) = 14.72$, $p < .05$, $p\eta^2 =$

1. Partial Eta Squared should be interpreted using the following criteria; .01 = Weak, .06 = Moderate, and .14 = Large (Gray & Kinnear, 2012, p 323; and Pallant 2016, p 285).

.507, representing a large effect size). The results of simple effect analysis will (Table 8, Table 9, and Table 10); a) compare the groups' means on pretest of oral performance, b) probe any significant improvement in each group's means from pretest to posttest; and finally, compare the groups' means on posttest of oral performance.

Table 7

Tests of Within-Subjects Effects for Pretest and Posttest of Oral Performance by Groups

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Tests	Sphericity Assumed	2688.982	1	2688.982	177.822	.000	.805
	Greenhouse-Geisser	2688.982	1	2688.982	177.822	.000	.805
	Huynh-Feldt	2688.982	1	2688.982	177.822	.000	.805
	Lower-bound	2688.982	1	2688.982	177.822	.000	.805
Tests* Group	Sphericity Assumed	668.175	3	222.725	14.729	.000	.507
	Greenhouse-Geisser	668.175	3	222.725	14.729	.000	.507
	Huynh-Feldt	668.175	3	222.725	14.729	.000	.507
	Lower-bound	668.175	3	222.725	14.729	.000	.507
Error (Tests)	Sphericity Assumed	650.235	43	15.122			
	Greenhouse-Geisser	650.235	43	15.122			
	Huynh-Feldt	650.235	43	15.122			
	Lower-bound	650.235	43	15.122			

Table 8 shows the results of simple effect analysis for comparing the groups' means on the pretest of oral performance. Based on these results, and the descriptive statistics shown in Table 5 it can be concluded that;

A: There was no significant difference between IE in BI (M = 55.77) and IF in BI (M = 54.00) groups' means on the pretest of oral performance (MD[1] = 1.77, $p > .05$).

B: There was no significant difference between IE in BI (M = 55.77) and IF in VI (M = 55.00) groups' means on pretest of oral performance (MD = .733, $p > .05$).

1. MD stands for mean difference.

Table 8

Simple Effect Analysis for Comparing Groups' Means on Pretest of Oral Performance

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
IE in BI	IF in BI	1.773	2.142	.412	-2.546	6.092
	IF in VI	.773	2.142	.720	-3.546	5.092
IE in VI	IE in BI	.477	2.142	.825	-3.842	4.796
	IF in BI	2.250	2.095	.289	-1.974	6.474
	IF in VI	1.250	2.095	.554	-2.974	5.474
IF in VI	IF in BI	1.000	2.095	.635	-3.224	5.224

C: There was no significant difference between IE in VI (M = 56.25) and IE in BI (M = 57.77) groups' means on pretest of oral performance (MD = .477, p > .05).

D: There was no significant difference between IE in VI (M = 56.25) and IF in BI (M = 54.00) groups' means on pretest of oral performance (MD = 2.25, p > .05).

E: There was no significant difference between IE in VI (M = 56.25) and IF in VI (M = 55.00) groups' means on pretest of oral performance (MD = 1.25, p > .05).

F: There was no significant difference between IF in VI (M = 55.00) and IF in BI (M = 54.00) groups' means on pretest of oral performance (MD = 1.00, p > .05). Figure 4.1 shows the four groups' means on pretest of oral performance.

Figure 1

Means on Pretest of Oral Performance by Groups

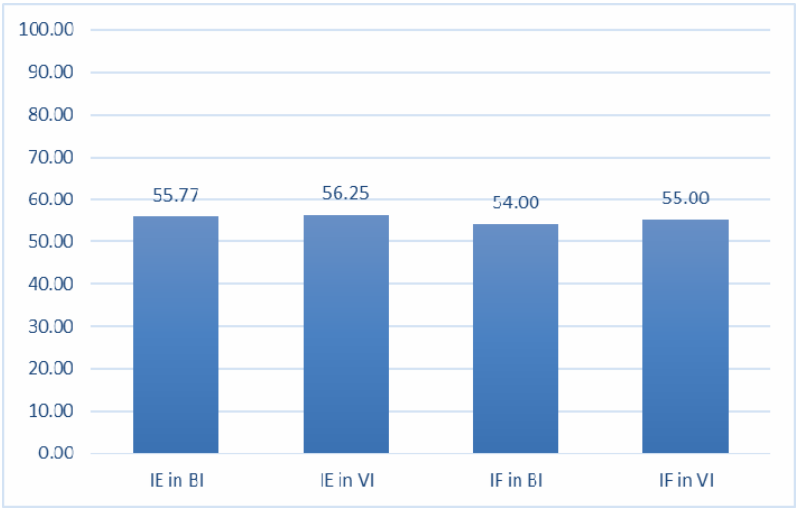


Table 9 explores each group's mean improvement from pretest to posttest. These results can be employed to answer the first four null hypotheses. Based on these results and the descriptive statistics shown in Table 5, it can be concluded that;

A: The IF in VI group had a significantly higher mean on posttest of oral performance (M = 61.33) than pretest (M = 55.00) (MD = 6.33, p < .05). Thus; it can be concluded that IF in VI did not have any significant effect on Iranian EFL learners' oral performance.

Table 9

Simple Effect Analysis for Comparing Each Group's Mean Improvement from Pretest to Posttest

Group	(I) Tests	(J) Tests	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
						Lower Bound	Upper Bound
IE in BI	Posttest	Pretest	15.818*	1.658	.000	12.474	19.162
IE in VI	Posttest	Pretest	4.500*	1.588	.007	1.298	7.702
IF in BI	Posttest	Pretest	16.167*	1.588	.000	12.965	19.368
IF in VI	Posttest	Pretest	6.333*	1.588	.000	3.132	9.535

*. The mean difference is significant at the .05 level.

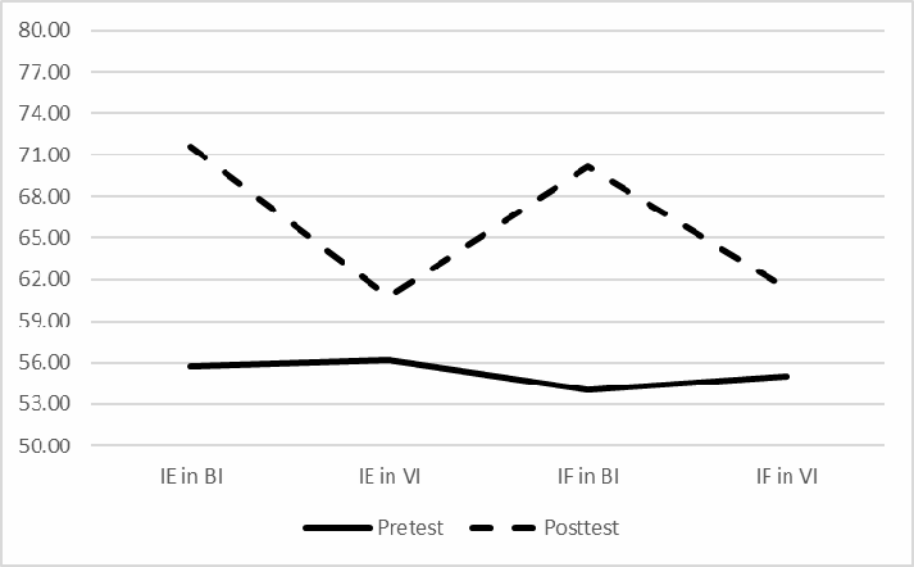
B: The IF in BI group had a significantly higher mean on posttest of oral performance (M = 70.16) than pretest (M = 54.00) (MD = 16.16, p < .05). Therefore; it can be concluded that IF in BI did not have any significant effect on Iranian EFL learners' oral performance.

C: The IE in VI group had a significantly higher mean on posttest of oral performance (M = 60.75) than pretest (M = 56.25) (MD = 4.50, p < .05). Hence; it can be concluded that IE in VI did not have any significant effect on Iranian EFL learners' oral performance.

D: The IE in BI group had a significantly higher mean on posttest of oral performance (M = 71.59) than pretest (M = 55.77) (MD = 15.81, p < .05). Thus; it can be concluded that IE in BI did not have any significant effect on Iranian EFL learners' oral performance. Figure 2 shows the four groups' mean improvement from pretest to posttest of oral performance.

Figure 2

Mean Improvement from Pretest to Posttest of Oral Performance by Groups



Moreover, finally, Table 10 compares the groups' means on the posttest of oral performance. Based on these results, and the descriptive statistics shown in Table 5, it can be concluded that;

A: The IE in BI group (M = 71.59) had a significantly higher mean than the IE in VI group (M = 60.75) (MD = 10.84, $p < .05$).

Table 10

Simple Effect Analysis for Comparing Groups' Means on Posttest of Oral Performance

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
IE in BI	IE in VI	10.841*	1.953	.000	6.903	14.779
	IF in BI	1.424	1.953	.470	-2.514	5.362
	IF in VI	10.258*	1.953	.000	6.320	14.196
IF in BI	IE in VI	9.417*	1.910	.000	5.565	13.268
	IF in VI	8.833*	1.910	.000	4.982	12.685
IF in VI	IE in VI	.583	1.910	.762	-3.268	4.435

*. The mean difference is significant at the .05 level.

B: There was no significant difference between the IE in BI (M = 71.59) and IF in BI (M = 70.16) groups' means on the posttest of oral performance (MD = 1.42, p >

.05).

C: The IE in BI group (M = 71.59) had a significantly higher mean than the IF in VI group (M = 61.33) (MD = 10.25, p < .05).

D: The IF in BI group (M = 70.16) had a significantly higher mean than the IE in VI group (M = 60.75) (MD = 9.41, p < .05).

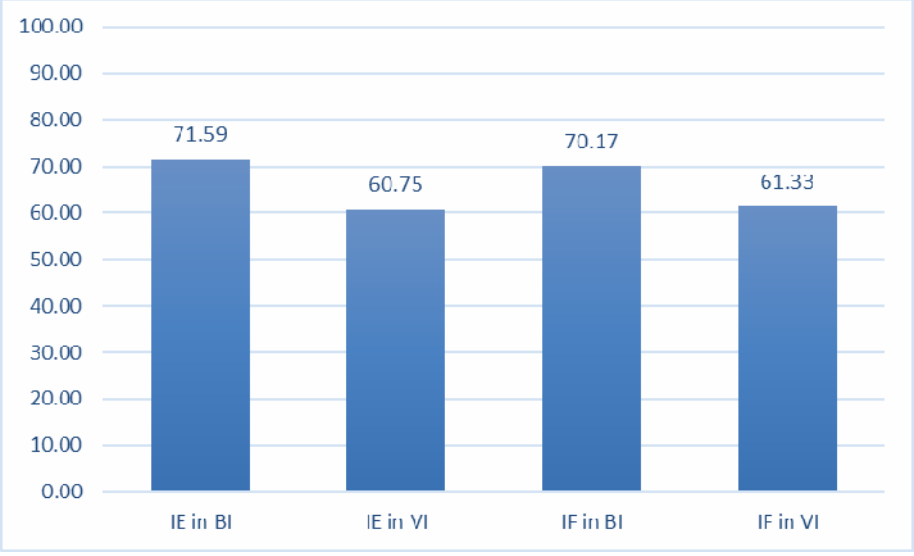
E: The IF in the BI group (M = 70.16) had a significantly higher mean than the IF in the VI group (M = 61.33) (MD = 8.83, p < .05).

F: There was no significant difference between IF in VI (M = 61.33) and IE in VI (M = 60.75) groups' means on posttest of oral performance (MD = .583, p > .05).

Figure 3 shows the four groups' means on the pretest of oral performance.

Figure 3

Means on Posttest of Oral Performance by Groups



Discussion

The purpose of this study was to explore the impact of computer-supported input flooding (IF) and input enhancement (IE) techniques on the collaborative oral performance of EFL learners in both blended (BC) and virtual classes (VC). The study included four groups: IE in BC, IE in VC, IF in BC, and IF in VC, each investigating the effects of these techniques in different educational settings.

The results of the posttest revealed significant improvements in the

performance of all four groups compared to their pretest scores. Additionally, the findings showed no statistically significant difference between the outcomes of the IE in BC and IF in BC groups, as well as between the IE in VC and IF in VC groups. However, both the IE in BC and IF in BC groups demonstrated significantly better performance compared to the IE in VC and IF in VC groups. The significant improvements observed in all groups from pretest to post-test can be attributed to the utilization of IE and IF techniques within the BI and VI instructional environments. These findings are consistent with prior research highlighting the positive impacts of blended instruction across various language learning and teaching domains, including learning achievement, science process skills, learning strategies, and students' perceptions (Fisher et al., 2018; Harahap et al., 2019; Lapitan et al., 2021; Mali & Lim, 2021). Furthermore, this study not only confirmed the effectiveness of blended instruction in teaching oral performance to EFL learners but also indicated the superior performance of BC groups (IE in BC and IF in BC) compared to VC groups (IE in VC and IF in VC). One possible explanation for this superiority is the participants' preference for a combination of face-to-face and online instruction, allowing them to leverage their strengths. Prior studies have demonstrated that learners tend to perform better and appreciate the blended format (Boelens et al., 2017; McDonald, 2012). Another contributing factor to the enhanced performance of BC groups may be the level of monitoring provided. In VC groups, learners take on greater responsibility for their performance and face increased autonomy in the language learning process. However, this heightened autonomy can have negative consequences, as not all learners possess adequate self-regulation and self-direction skills. Many benefit from teacher observation and monitoring (Boelens et al., 2017). The type of feedback received may also play a role in the improved performance of BC groups. BC learners receive multimodal feedback, combining verbal and visual elements, which can enhance productivity (Tai, 2022). In contrast, VC learners' classes and activities are solely conducted in a virtual context, lacking the combination of physical and virtual elements that BC learners experience. This combination may contribute to the superior performance of BC groups. Weaker results in VC groups may be attributed to issues in managing problems on the part of the teacher, a lack of exam preparation by students (Erümit, 2021), insufficient hardware infrastructure, or inadequate knowledge of how to use VC-related

equipment among learners and teachers (Shahzad et al., 2020). Studies by Boelens et al. (2017) and McDonald (2012) also suggest that VC learners may feel isolated and disconnected, leading to demotivation. Overall, the affective learning climate of BC groups appears to align more closely with learners' needs and expectations, potentially contributing to their superior performance.

Regarding the effectiveness of VI, several factors come into play. The flexibility of virtual instruction allows learners to plan their activities, manage their timetables, and personalize their learning experiences, fostering a sense of ownership in the learning process among VC group members (Pulham & Graham, 2018). Additionally, VI's features, including autonomy, flexibility, learner-centeredness, personalization, and scheduling, contribute to its effectiveness, in line with previous studies emphasizing the positive effects of virtual instruction (Aghajani & Adloo, 2018; Huang et al., 2018; Manegre & Sabiri, 2020; Shahzad et al., 2020).

Concerning the IE and IF techniques, both were found to be effective in improving EFL learners' collaborative oral performance from the pretest to the post-test. These findings align with previous studies highlighting the positive effects of IE and IF on various language teaching and learning skills and sub-skills (Benati, 2021; Chung & Revesz, 2021; Malone, 2018; Namaziandost et al., 2020; Perez et al., 2018; Peters, 2019). It appears that these techniques successfully created opportunities for learners in all four groups to notice and raise their awareness of specific linguistic features, providing them with the necessary comprehensible input to facilitate their learning and lead to improved scores.

In linking the discussion to the conceptual framework, it is essential to recognize that the observed improvements in collaborative oral performance across the IE and IF groups within both Blended Classes (BC) and Virtual Classes (VC) align with the foundational principles of the theoretical frameworks underpinning this study. Vygotsky's sociocultural theory (1978) underscores the significance of social interaction and collaborative learning, explaining the notable progress in the BC groups where face-to-face interactions complemented virtual elements. Krashen's Input Hypothesis (1985) finds support in the effectiveness of both IE and IF techniques, emphasizing the role of comprehensible input in language acquisition. Constructivism's emphasis on learner engagement and active participation resonates

with the collaborative tasks employed, particularly in BC groups. The theory of distributed intelligence complements the findings, highlighting the benefits of a blended approach where learners draw on both physical and virtual resources. Tikhomirov's (1981) notion of reorganization of thinking is reflected in the cognitive processes stimulated by IE and IF techniques. Thus, the observed outcomes substantiate the theoretical foundations, emphasizing the synergy between the instructional techniques and the conceptual framework.In conclusion, the results of this study contribute to a deeper understanding of the impact of computer-supported input flooding and input enhancement on EFL learners' collaborative oral performance in blended and virtual classes. Blended instruction and virtual instruction both offer valuable approaches for enhancing the oral performance of Iranian EFL learners. The integration of theoretical frameworks, such as Vygotsky's sociocultural theory (1978), Krashen's Input Hypothesis (1985), constructivism, the theory of distributed intelligence, and Tikhomirov's notion of reorganization (1981) of thinking, provides insights into the underlying mechanisms through which these instructional approaches impact language learning. The input enhancement (IE) and input flood (IF) techniques also demonstrated their potential in promoting language learning by facilitating the noticing and comprehension of linguistic features. These techniques can be valuable additions to language teaching practices, allowing learners to engage with meaningful input and enhance their language skills.

Conclusion

The findings of this research emphasize the valuable role that input enhancement (IE) and input flood (IF) techniques can play in improving the oral performance of Iranian EFL learners across both blended instruction (BI) and virtual instruction (VI) settings. Nevertheless, it is essential to acknowledge that BI groups (IE in BI and IF in BI) demonstrated superior performance compared to their VI counterparts (IE in VI and IF in VI), highlighting the effectiveness of blended instruction in teaching oral skills. These results underscore the importance of incorporating face-to-face elements into language instruction to achieve enhanced learning outcomes. English educators and educational institutions can draw on these techniques to create more engaging, flexible, and learner-centered approaches for teaching speaking skills.

However, it is crucial to interpret these findings with some caution due to the study's limitations, including a limited time frame and a relatively small sample size. To strengthen the validity and generalizability of these results, future research could replicate this study with larger participant groups, an extended study duration, and a more extended treatment period. These improvements would contribute to a more comprehensive understanding of the topic. Additionally, researchers can explore the effectiveness of these techniques using diverse platforms and applications, such as WhatsApp, YouTube, or alternative virtual learning environments. Investigating the affective learning climate within blended and virtual instruction settings, given its substantial influence on outcomes, would provide valuable insights for future studies. Furthermore, subsequent research may examine the impact of the techniques applied in this study on other language skills within a similar framework, offering a more comprehensive view of their effects. As this study primarily focused on male high school students, future investigations should encompass female students and learners at various educational levels to broaden the scope of understanding. Given the experimental nature of this study, efforts to enhance ecological validity while controlling relevant variables can be explored in future research. Overall, this study contributes to the field of language teaching and learning by shedding light on the effectiveness of different techniques and instructional environments in enhancing the oral performance of Iranian EFL learners. It serves as a foundation for subsequent research aimed at refining instructional practices and creating more effective language learning experiences.

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