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Research Paper

Effect of Asynchronous Computer-Mediated Condition on EFL Learners' Social and Emotional Engagement with Speaking Tasks

Matin Ramak[1], Hossein Siahpoosh[2]*, Mehran Davaribina[3]

[1]PhD student in TEFL, Department of English, Ardabil Branch, Islamic Azad University, Ardabil, Iran
matin.ramak@yahoo.com
[2]Assistant professor, Department of English, Ardabil Branch, Islamic Azad University, Ardabil, Iran
siahpoosh_h@iauardabil.ac.ir
[3]Assistant professor, Department of English, Ardabil Branch, Islamic Azad University, Ardabil, Iran
davaribina@gmail.com

Abstract
The study of second language learners' engagement with language learning tasks has become an enchanting line of research since several studies in general education and second language literature have proved its significant effects on learners' ultimate educational success. However, there are several niches in the literature which have not been occupied yet. One of these niches, addressed in this study, is the examination of the effect of computer-mediated condition on second language learners' emotional and social engagement with speaking tasks. Using a repeated-measures design, 40 intermediate language learners performed computer-mediated and face-to-face speaking tasks in a counterbalanced fashion. A questionnaire and semi-structured interviews were employed to collect the required data to respond to the questions. The results showed that learners were more emotionally and socially engaged with the computer-mediated speaking tasks. It was also revealed that low-intermediate learners' use of social engagement indicators was significantly higher in the computer-mediated condition; however, the change in the condition did not significantly affect the quantity of social engagement indicators provided by high-intermediate ones. The findings also indicated that different engagement dimensions are interconnected, and the change in one of them can affect the other ones.
Keywords: *Computer-mediated communication, emotional engagement, social engagement, speaking task*

تاثیر ارتباط رایانه ای غیر هم زبان غیرهمزمان بر مشارکت اجتماعی و عاطفی فراگیران ن نگلیر تکالیف مهارت گفتار
مشارکت فراگیران زبان دوم در تکالیفی که هدف آنها یادگیری زبان است به یک موضوع پژوهشی جذاب تبدیل شده است. پژوهش‌های متعددی نشان داده‌اند که مشارکت فراگیر فرد در تکالیف تاثیر چشمگیری بر موفقیت نهایی وی دارد.لالالاین وجود خلاء های تحقیقاتی فراوانی دلا لإلالالا لا لالاق وجود دلالد که هنوز مولاد توجه‌لارلا نگلالالاست. یکی از این خلا ها که در ا لا مطلالعلا بررسلا لالعلا ا لا،لالارسی تلالار لالتباط رلالانلای غیرهمزمان بر مثلارلات لاماعلا و لاناطفی یادگیرلاگان زبان خارجی انگلیسی در تکالیف ملارت گفتار می باشد. با استفاده از طرح پژوهشی اندازه گیری مکرر، ۴۰ زبان آموز سطح متوسط تکالیف را در دو شرایط رایانه‌ای و رودررو انجام دادند. از یک پرسشنامه و مصاحبه نیمه سازمـ . یافته برای جمع آولای لاده ه‌لاستفاده لالالا یا لا لاوالات پژوهشی به دست آید. لالاجلالان پـ لا لا نلالان لالا لالا فلاناگلاران در لارلی‌لا لالالالای لالالالا لا لالا لالالالالالا لالارکت‌لالالالا لالالالا. همچنین .تایج ذ. . ا.إکه ف ..گیران سطح پایینتر از متوسط از نشانگرهای مشارکت اجتماعی بیشتری در شرایط رایانه‌ای استفاده کردند، اگرچه تغـ.ر در شرلا.ط تالالا چلامگلالای بلا لالات‌لاشلالارهالا فراگـلا لا سـ لا لإلاترلالا ملالالا تلا لالا. نتایج همچنین نشان داد که ابعاد مختلف مشارکت به هم مرتبط هستند وتـغییر در یکی از ا.عـ. .ی .واند. بـ. .یگر .وا .. هـ. .و.ر با .د.
لا . : تکالیف گفتاری، ارتباط یا و.سطه رایانه، .شار .. اجتمـ.. .، مشارکت لإطفی

Introduction

Speaking in a second language is a demanding task since learners need to manage segmental phonemes, suprasegmental features, the lexicon, and morphosyntax while speaking in a second language (Luoma, 2004). In addition, they have to focus on interactional and pragmatic norms to successfully interact with other native or non-native speakers of a second language. Several prior studies have shown that learners have hard time learning their second language (e.g., Derakhshan et al., 2016; Lin, 2020), and practitioners have examined different measures to improve their learners' second language speaking ability (Litman et al., 2018).

One of the innovative measures taken by second language teachers is the use of new technologies (Hoomanfard & Rahimi, 2020; Tsai, 2019). In recent years, researchers and teachers have used different synchronous and asynchronous technologies to improve their students' speaking ability; however, little is known about the effect of using asynchronous computer-mediated condition on L2 learners' emotional and social engagement with speaking tasks.

Learners' engagement with speaking tasks in EFL (English as a Foreign Language) contexts is of significance since learners have minimal opportunities to practice speaking inside classrooms, and they are usually deprived of out-of-class interactions in their second language. Engagement has become a popular construct in second language learning in recent years (Aubrey et al., 2020), and in its relatively short history, learner engagement has been identified as a significant factor in learners' second language development (Dörnyei, 2019; Ellis, 2019; Jafarigohar et al., 2018).

Despite the consensus on the pivotal role of engagement in second language development, many teachers have found encouraging second language learners to engage with speaking tasks as a challenging activity (Humphreys et al., 2015). In the last two decades, several studies have been conducted to examine the effect of computer-mediated tasks on learners' speaking performance (cognitive dimension of learner engagement); however, little is known about learners' social and emotional engagement with asynchronous computer-mediated speaking tasks. The present study aims to occupy this niche in the literature by conducting a mixed-methods study on the issue and examine Iranian EFL learners' engagement with speaking tasks in face-to-face and computer-mediated conditions.

Purpose of the Study

Although prior studies have informed us about the effects of different task conditions on learner engagement (especially in writing and feedback studies), little is known about the effect of using asynchronous computer-mediated condition on learners' emotional and social engagement with speaking tasks. The objective of this study was two-fold. First, the researchers compared Iranian EFL learners' social engagement with asynchronous computer-mediated and face-to-face speaking tasks. Second, the learners' emotional engagement with speaking tasks in both face-to-face and asynchronous computer-mediated conditions were examined. The following research questions guided the present study:

Research question one. What is the effect of asynchronous computer-mediated condition on EFL students' social engagement with speaking tasks?

Research question two. What is the effect of asynchronous computer-mediated condition on EFL students' emotional engagement with speaking tasks?

Literature Review

Computer-Mediated Communication in L2 Pedagogy

Computers have been employed for decades to improve the effectiveness of second language pedagogy. In recent years, advances in the production of portable devices such as smartphones, tablets, and laptops have increased the integration of computer applications into second/foreign language programs (Parmaxi & Demetriou, 2020) to improve the effectiveness of teaching endeavors and positively affect learners' second language development.

Prior empirical studies and second language learning theories have supported the use of technologies in second language classes. The examination of the literature on computer-assisted L2 pedagogy shows the remarkable effect of learning condition (including computer-mediated condition) on learners' second language development (e.g., Zhang & Zou, 2021; Zou & Thomas, 2019). The comprehensive review articles by Parmaxi et al. (2016) and Blake (2017) have shown that the use of technologies in second language classes is mainly supported by the social constructivism. Based on social constructivism, learners move from other-regulation to self-regulation through social interactions (Lantolf & Poehner, 2011), and mediational tools such as dialogues or computerized technologies (Kim, 2020) can form the quality and quantity of learners' cognitive development.

In addition to the sociocultural theory, other main hypotheses and theories such as input hypothesis (Krashen, 1987), interaction hypothesis (Long, 1981), and flow theory (Csikszentmihalyi, 1990) support the use of computers in second language classes since they can provide second language learners with a significant amount of input, which can function as positive evidence for second language learners to internalize different items. Computers, especially computer-mediated technologies, enable learners to interact with other users of the target language. These interactions have been reported to help learners through negotiation of meaning, which can improve learners' second language ability (Shokrpour et al., 2019). Furthermore, the opportunities that they find to produce second language output in these interactions can help them analyze the grammatical structure more deeply (Castañeda, 2019). Finally, different studies have drawn on the flow theory to describe the suitable condition that computer-mediated communication technologies provide for second language learners since the condition is usually in a manner which is neither too boring nor too anxiety-provoking. Thus, learners can remain in a desirable affective level, which is reported to be necessary for second language learning (Hubbard & Colpaert, 2018).

A wide range of computerized programs have been used to improve learners' second language speaking ability (Blake, 2017; Mahmoudikia et al., 2014), but computer-mediated communication platforms have become the most popular option for the benefits that they bring to L2 speaking instruction contexts. Initially, due to technological limitations, researchers examined the effect of written asynchronous communication on learners' speaking ability (Payne & Whitney, 2002) and found the positive effects of written interactions on learners' L2 oral performance. By the introduction of Voice over IP in the first years of the third millennium, however, researchers started to extensively examine the affordances of two-way synchronous and asynchronous speaking platforms.

But to what extent can these new technologies improve second language learners' engagement with speaking tasks? The following section provides a brief review of engagement in educational settings and engagement with second language tasks.

Engagement

One of the first conceptualizations of learner engagement was provided by Natriello (1984). He defines learner engagement as the active participation of a learner in a given task. In a more elaborated conceptualization, Fredricks et al. (2004) included three aspects of behavioral engagement (learners' time spent on task or participation), cognitive engagement (attention and mental effort), and emotional engagement (learners' interest, enthusiasm, and enjoyment). However, in recent years, the concept has been expanded, and dimensions such as social engagement, referring to interactions and collaborations, (Philp & Duchesne, 2016) and agentic engagement, "students' intentional, proactive, and constructive contribution into the follow of the instruction they receive" (Reeve, 2012, p. 161), have been added to the literature of learner engagement, and all or some of these dimensions are included in different studies.

Learner engagement is defined as learners' involvement in learning tasks (Schunk & Mullen, 2012), and several studies in the last three decades have shown that learners' engagement is positively correlated with their educational achievement (e.g., Amiryousefi, 2017; Christenson et al., 2012; Kuh et al., 2008). Skinner et al. (2008), providing a model of learning, argue that learner characteristics and learning experience, which include learners' personal factors and contextual features of learning contexts, form learners' engagement with tasks (cognitive and emotional engagement types) and can consequently determine students' learning.

In the realm of second language learning, learner engagement has a short history; however, significant attention has been paid to this concept in recent years. Ellis (2019), for instance, argues that learners' engagement during task performance is crucial for learners to notice and establish form-meaning links. Philp and Duchesne (2016, p. 51) define learner engagement as "heightened attention and involvement' in a learning task". This definition seems inadequate since only one engagement aspect (i.e., cognitive) has been mentioned as the only engagement angle. The same problem has been witnessed in the study carried out by Amiryousefi (2017), in which learner engagement and behavioral engagement were used to refer to the same concept. However, several studies, either studying one aspect or all aspects, have conceptualized learner engagement as a multi-dimensional concept (Dao, 2019; Dao, 2020; Han, 2017; Hiver et al., 2020; Zhang, 2020).

Method

Design

Since the aim of the study was to compare the participants' social and emotional engagement in two different conditions, the researchers employed a repeated-measures design to collect the required data from the same group under two conditions. This research design is chiefly used on those occasions when learners' characteristics (as extraneous factors) can affect their performance and jeopardize the internal validity of a study. Several factors such as learners' willingness to communication, extroversion/introversion profile, communication apprehension, and computer literacy could have affected the findings if two independent groups had been employed to answer the research questions. Furthermore, a counterbalancing design was used to remove the order effect of the conditions. As Ary et al. (2010) state, "when intact classes must be used, counterbalancing provides an opportunity to rotate out any differences that might exist between the groups" (p. 319). Table 1 provides a brief description of the design of this study.

Table 1

Design of the Study

Sessions 2-10	Group 1: Face-to-face condition Group 2: Computer-mediated condition Session 5: Collecting social engagement data (1st round)
Sessions 11-18	Group 1: Computer-mediated condition Group 2: Face-to-face condition Session 15: Collecting social engagement data (2nd round)
	Interviews

Participants

The participants of this study included 40 intermediate-level students who were studying English at a private institute in Iran. The participants were all female, and their age ranged between 18 and 35 years (M = 25.3, SD = 2.8). They were all native speakers of Farsi and were selected based on convenience sampling. Then, they were assigned to the two classes randomly. According to the charter of the institute, the participants were of intermediate English ability; however, to ensure about their English language command, they took Oxford Proficiency Test two weeks before the term commencement, and the results showed that the participants' scores ranged between 44 and 73, reflecting their intermediate level (M = 58.4, SD = 4.7), and there was no significant difference between the mean scores of the two participating groups ($t(18) = -.828$, $p = .411$). In this study, intermediate students were selected since they were proficient enough to accomplish extended monologues, and there were still room for their speaking improvement.

Instruments and Materials

Oxford Placement Test

The researchers employed Oxford Placement Test to tap the English language proficiency of the participants. Oxford Placement Test is a well-established English language proficiency test, which includes the use of English (grammatical forms, meaning, and form, and meaning) and listening sections. Each correct answer was given one point, and the highest score was 120. The participants had 60 minutes to answer the questions.

Speaking Task

A speaking task was employed to ensure the homogeneity of the learners in both classes regarding their speaking ability at the beginning of the study. This task was extracted from *IELTS Academic 14: With Answers (2019)*, which is published by Cambridge University Publication, and the tasks included in this book are claimed to be authentic and taken from the original IELTS tasks. IELTS task 2 was employed in this study. IELTS speaking Task 2 requires the participants to read information provided on a card, prepare for one minute and then talk for one to two minutes. The students were familiar with the topic (education). The learners' performance in this task was recorded for further analysis.

Asynchronous Computer-Mediated Medium

Edmodo was employed as the asynchronous computer-mediated communication tool. Edmodo is one of the e-learning platforms that can be used in educational settings to improve

teaching and learning (Embi, 2011). Edmodo provides a free site for connecting students, teachers, parents, and administrators in a digital world. It is also one of the popular global educational networks to provide communication, collaboration, and training methods that allow all students to meet their full learning potential (Renard, 2016). Moreover, a captivating feature of Edmodo is that the free Edmodo Mobile app allows learners to access any recorded materials anytime and anywhere, and it is regarded as a great tool for aiding teachers to manage their online classes simply (Mokhtar & Dzakiria, 2015).

Emotional Engagement Questionnaire

A short questionnaire developed by Dao and McDonough (2018) was employed in this study to examine the participants' emotional engagement with different task conditions. This Likert-scale questionnaire has been validated by the developers and has been employed in other recent studies (e.g., Dao, 2019). This questionnaire includes five items which addressed learners' enjoyment, interest, excitement, enthusiasm or boredom while performing tasks. The reliability of this measure in the study conducted by Dao and McDonough (2018) was .88, and in the present administration was .86. The items taken from (Dao, 2019, p. 7) were

I felt enjoyable when interacting and doing the task,
I felt interested when interacting and doing the task,
I felt excited when interacting and doing the task,
I felt enthusiastic when interacting and doing the task, and
I felt bored when interacting and doing the task.

Semi-Structured Interview

In order to uncover the participants' emotional engagement with face-to-face and computer-mediated conditions, the researchers interviewed the participants. Immediately after the term, the researchers interviewed 34 of the participants since six of them decided not to participate in the interview phase of the study since participation in it was voluntary. The interviews were in Persian, the participants' mother tongue, to avoid missing any information (Pavlenko, 2008). The researchers started with simple questions such as "How did you like the face-to-face speaking tasks?" and "How did you feel while performing the online speaking tasks?". Further questions were asked based on the students' responses. The interviews continued until theoretical saturation was achieved. The interviews were audio-recorded and transcribed for further analysis.

Treatments

Face-to-face and computer-mediated conditions were practiced in this study. Since a counterbalanced research design was employed, the students in class 1 practiced face-to-face speaking practice in the first half of the term and computer-mediated speaking practice in the second half. Reversely, those in class 2 practiced speaking in the computer-mediated condition first and then employed face-to-face speaking tasks to improve their speaking ability. The same books and units were covered in both classes, and the same teacher moderated the classes. In both conditions, the participants had to complete one speaking task in each session. In the conventional condition, the last 45 minutes of each session were allocated to speaking practice. However, in the computer-mediated condition, the students had to complete their speaking tasks and exchange questions and answers online. Each session, the students were put in groups of four randomly. The groups changed each session to let learners get familiar with different speaking styles and be exposed to different structural and lexical items. The students in both groups

practiced how to analyze a monologue in the first three sessions. The teacher provided a model, asked some students to analyze the monologue, and then asked all students to examine the monologue. Then, she provided her students with feedback on the accuracy and comprehensiveness of their analyses.

The task included the presentation of a video clip, which provided a sample of a monologue to learners. The length of videos was around five minutes, and they were suitable for intermediate English language learners. Then, the participants in the conventional condition had 10 minutes to analyze the monologue regarding the grammatical structures, vocabularies, and organization of the monologue and raise their questions about the video from their peers. After a three-minute preparation time, they had to produce monologues of utmost five minutes. Finally, they provided feedback on their classmates' performance and had to present their revised monologues in the next session.

The same steps were undergone in the asynchronous computer-mediated condition. Nine videos were used in this condition, but the analysis time was 24 hours. The videos were uploaded on the class webpage, and the participants had one day to watch each video, share their own assessment with their peers. During this period, the participants could analyze the monologue, ask and answer questions about the meaning of the lexical items, grammatical structures, or the organization of the monologue. Then, they had one day to record their own monologue and post it online. The participants had one chance to upload their videos, and a second attempt was not allowed. Then, they had one day to give feedback on their peers' performance. Finally, the speakers had to upload a revised version of their monologues before the next session. All these interactions were done asynchronously.

Data Collection and Analysis

The data required to answer the research questions were collected in a four-month period. The data collection started with administering the English language proficiency test two weeks before the term, and the learners' speaking scores were gleaned in the first session. To examine the participants' social engagement with the tasks provided in different conditions, their interactions while performing speaking tasks in two tasks (five and 15) were collected. In the face-to-face condition, their interactions were recorded using cellphones, and in computer-mediated condition, the learners' interactions were automatically recorded on the website. The learners were interviewed after the eighteenth session.

The researchers computed the learners' general English language proficiency scores using the answer key provided with the Oxford Placement Test, and the participants were categorized into B1 (lower-intermediate) and B2 (upper-intermediate) categories based on the manual of the test. The learners' speaking performance was scored using the IELTS holistic scoring scheme, which included five criteria (i.e., Fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation), and scores between 1 to 9 were assigned to each performance. The first author of this study scored all recordings once, and then an experienced official IELTS examiner (out of the research team) assigned scores to half of the collected recorded data, and the inter-rater reliability of .92 was obtained.

The participants' responses to the Likert-scale questionnaire were collected using a 10-point scale. The learners' responses were compared across the two speaking practice conditions using Wilcoxon signed-rank test since the results of Shapiro-Wilk tests showed that the data collected were not normally distributed. The interviews were transcribed for further analysis. Using the thematic analysis, an inductive category-formation process, the researchers identified the main themes provided by the participants in their interviews. After the formation of the themes based

on half of the data, an educational researcher, an associate professor in applied linguistics, examined the categories and provided some comments. After applying her comments, the researchers examined all data and categorized the themes into different sets. The educational researcher deductively categorized one-third of the data and an inter-coder value of .94 was achieved. In an extensive discussion, the researchers of this study and the educational researcher reached agreement on the disputed areas, and the researchers made some changes in the categories.

To analyze the learners' social engagement in the two speaking practice conditions, the researchers employed the criteria provided by Dao and McDonough (2018), which included encouragement (when a participant encouraged his/her interlocutor to proceed speaking or expanding the argument), responsiveness (reactions to an interlocutor by answering a question, elaborating on previously-mentioned arguments), and management (when an interlocutor managed the conversation by reiterating the topic to avoid digression or mentioning the remained time). Although, in previous studies (Dao, 2019; Tromifovich et al., 2021), backchanneling and nodding were also examined as the indicators of social engagement, since they were not relevant to asynchronous computer-mediated communication, the researchers decided to exclude them from the study. Some instances of these indicators found in the present study are provided in the Results section.

The number of each social engagement indictor was determined. First, the researchers and the educational researcher examined one-fourth of the data and identified these indicators, and the inter-coder reliability value of .93 was obtained. Then, the researchers analyzed the whole data, and the educational researcher examined half of the data, and the inter-coder reliability value of .95 was achieved.

Results

Social Engagement

To examine the participants' social engagement with speaking tasks in computer-mediated and face-to-face conditions, the researchers computed the number of three social engagement indicators (i.e., encouragement, responsiveness, and conversation management). The first indicator included the phrases and sentences that learners employed to encourage their classmates to participate in the interaction. They used these sentences to extend the conversation and exchange ideas. The followings are some examples of this indicator in the present data.

"Maryam! Let us know about your opinion."

"What are your thoughts on my comment?"

"Is what I am saying clear?"

Responsiveness was another indicator which showed learners' reactions to a peer's question or statement. In some cases, the participants reacted to the statement mentioned by a peer. They did so to agree, disagree, or modify the opinion of a peer and expressed their own stance. They also responded to the questions either being addressed to them. In some cases, when a question was left unanswered, usually another peer, rather than the addressee of the question, broke the silence and answered the question. Here are some examples of this indicator:

"I don't agree with you."

"I think you are right."

In a conversation and without being asked a question, one of the students said "Let me disagree with you."

The last indicator employed in this study was management, which included an interactant commented on the procedural aspects of the task. For instance, they talked about the sequence of the steps that needed to be taken to accomplish the task or the amount of time to allocate to each section to manage the progression of tasks. The following three instances are taken from the collected data.

"Let's get started."

"What should we do next?"

"Come on guys. We don't have much time."

Table 2

Social Engagement Indicator

	Computer-mediated	Face-to-face	Z	Sig. (2-tailed)
Encouragement	144 (M = 3.6, SD = 2.14)	91 (M = 2.27, SD = 2.01)	3.96	.001
Responsiveness	131 (M = 3.27, SD = 1.78)	103 (M = 2.57, SD = 1.92)	2.5	.012
Management	87 (M = 2.17, SD = 1.37)	64 (M = 1.6, SD = 1.29)	2.17	.030
Total	362 (M = 9.05, SD = 4.29)	258 (M = 6.45, SD = 4.55)	4.7	.001

As provided in Table 2, the participants employed significantly more social engagement indicators in the computer-mediated condition. The results showed that the participants encouraged their peers to participate in the interactions more in the computer-mediated condition (Mdn = 16.59) than in the face-to-face condition (Mdn = 12). The Wilcoxon signed-rank test showed that this difference was statistically significant ($T = 48$, $z = 3.96$, $p < .05$). Regarding responsiveness, the results showed that while interacting in the computer-mediated condition (Mdn = 19), the participants provided significantly more responses to the interactions than when they were in the face-to-face condition (Mdn = 13, $T = 143$, $z = 2.5$, $p < .05$). Similarly, the number of management indicators in the computer-mediated condition (Mdn = 16.2) was significantly more than that in the face-to-face condition, Mdn = 15.5, ($T = 139.5$, $z = 2.17$, $p < .05$). The total number of social indicators provided in the computer-mediated condition was also significantly more than that in the face-to-face condition ($T = 42$, $z = 4.69$, $p < .05$).

Moreover, to have a better understanding of the issue, the numbers of social engagement indicators provided by high and low-intermediate participants across the conditions were compared. First, the social engagement indicators of the high-intermediate learners in the computer-mediated and face-to-face conditions were compared, and the results showed that no significant difference was found between the quantity of social engagement indicators across the two conditions ($Z_{encouragement} = 1.28$, $p = .321$; $Z_{responsiveness} = 1.20$, $p = .229$; $Z_{management} = 1.21$, $p = .226$). However, low-intermediate students provided significantly more social engagement indicators in the computer-mediated condition than in the face-to-face condition ($Z_{encouragement} = 1.28$, $p < .05$; $Z_{responsiveness} = 1.20$, $p < .05$; $Z_{management} = 1.21$, $p < .05$).

Emotional Engagement

To understand the effect of employing computer-mediated and face-to-face conditions on learners' emotional engagement, the researchers employed a brief questionnaire and semi-structured interviews.

Questionnaire

One of the measures of emotional engagement in this study was a Likert-scale questionnaire. This questionnaire included five items which addressed learners' enjoyment, interest, excitement, enthusiasm or boredom while performing tasks. Table 3 presents the participants' responses to the items after practicing speaking in the computer-mediated and face-to-face conditions.

Table 3

Learners' Responses to the Questionnaire Items

Item	Computer-mediated Mean (SD)	Face-to-face Mean (SD)	Z	Sig. (2-tailed)
I felt enjoyable when interacting and doing the task.	5.8 (1.11)	5.02 (1.04)	2.86	.004
I felt interested when interacting and doing the task.	6.17 (.90)	5.05 (.93)	4.29	.001
I felt excited when interacting and doing the task.	6.22 (.86)	4.6 (.90)	4.93	.001
I felt enthusiastic when interacting and doing the task.	7.22 (.86)	5.15 (1.0)	5.05	.001
I felt bored when interacting and doing the task.	2.15 (.83)	2.45 (.84)	1.52	.127

As provided in Table 3, the participants were more emotionally engaged with speaking tasks in the computer-mediated condition than in the face-to-face one. The results of Wilcoxon signed-rank tests showed that in four items, the participants gave higher scores to the speaking tasks in the computer-mediated condition ($Z_{enjoyment} = 2.86$, $p < .05$; $Z_{interest} = 4.29$, $p < .05$; $Z_{excitement} = 4.93$, $p < .05$; $Z_{enthusiasm} = 5.05$, $p < .05$). However, the learners expressed low amounts of boredom for the tasks in these two conditions, and the difference between these two mean scores was non-significant ($Z_{enthusiasm} = 1.52$, $p = .127$).

Interview

The analysis of the interviews resulted in the formation of three main categories. The participants of this study believed that the computer-mediated speaking tasks were more beneficial for some reasons. Here is a review of the main themes extracted from the interviews.

Less-Threatening Atmosphere of the Computer-mediated Condition

The most recurrent theme in the interview data was the less-threatening atmosphere of the computer-mediated condition in comparison to that of the face-to-face tasks. A vast majority of the participants (N = 28 – 82 %) mentioned their more pleasant affective experience while performing the tasks online. Here are some of the statements taken from the interviews:

"I felt less stressful in these [computer-mediated] tasks. I could examine my friends' performance, think about my response, and then give them my feedback on their performance at my own favorable pace."

"When your classmates are not around, you feel less afraid of speaking English because you can modify your responses and comments several times before uttering them. … but in the

conventional classes, you need to express your thoughts in the presence of others, and there is no chance to correct what you want to say."

More Opportunities to Learn in the Computer-mediated Condition

A noticeable number of the participants (N = 24 – 70.58%) stated that they learned better in the computer-mediated condition because of its instructional affordances. Some of the interviewees (N = 18 – 53%) mentioned the higher amount of time they had to watch the videos enabled them to learn more from the videos. One of them said,The online alternative was way better since I could watch the videos several times. I had a plan. I used to watch a video once to pay attention to the organization of the speech, once to extract the vocabularies, and once to pay attention to the grammatical structures, but in the in-class condition, we could just watch it once. So, I believe the online condition noticeably helped me learn new items, but it didn't happen in the conventional sessions.

Some other students (N = 16 -- 47 %) referred to the higher number of language-related episodes in the computer-mediated condition. Here are two quotes taken from the interview data.

"Computer-mediated condition was better since my classmates asked and answered several questions. The number of questions were unbelievably higher in this condition since we had more time to ask and answer questions."

"In the online condition, learners gave more comments on their friends' performance. These comments could help the speaker understand the weaknesses of his/her performance. I, myself, learned a lot from the comments, but in the conventional half of the course, few comments were exchanged between the students."

"We provided and received more points in the computerized practice, I think these points helped me learn new things which I had not known before. The more we discussed, the more we learned."

More Positive Emotions

The interview data also showed the learners' more positive emotions about the computer-mediated feedback in comparison to the face-to-face one. Although the participants were generally liked both conditions, they employed significantly more positive emotion words such as (exciting, enjoy, interesting, like, love, etc.) while speaking about computer-mediated speaking tasks than while describing their experience with the conventional speaking tasks ($t = 79.5$, $z = 3.87$, $p < .05$). Here are a few quotes extracted from the interviews showing the participants' positive emotions toward asynchronous computer-mediated speaking condition.

"Computerized tasks were more interesting since we were involved in the use of new technologies to practice English".

"I loved the new method [computer-mediated] because I found it exciting to use computers to communicate in a foreign language."

"I was more motivated to practice speaking since I could see my speaking performance was evaluated by my friends."

"The exchange of comments and responses in the second half the term [computer-mediated condition] was so exciting. Many of those who were silent in class were questioning those who spoke better in the face-to-face condition."

"One of the exciting features of the computer-mediated speaking activities was the

"I liked the online version more because all students knew they were monitored by the teacher, so they were more committed to the task."

"Tasks are more exciting when they do not put you under pressure. I think the asynchronous nature of the activity reduced the pressure on us and enabled us to enjoy the practice."

"I felt more comfortable in the computerized sessions since I was not forced to answer immediately."

"I would like to have computerized speaking practice type again because I can get involved in an activity which was both educational and communicative. This can make the task considerably more interesting than the conventional task."

Discussion

The findings of the present study suggest that the computer-mediated condition provided a more suitable condition for both high- and low-intermediate students to actively participate with their peers. Different scholars have argued that asymmetrical power relations in second language classes can stem from the English language proficiency of the students (Hall, 2017; Walsh, 2006); however, the employment of the computer-mediated condition seemed to partially change this pattern and empowered the learners with lower English language ability to participate in the formation of interaction dynamics.

The examination of the literature on second language learning shows that computer-mediated conditions can have noticeable effects on learners' process and product of language learning (Hoomanfard & Meshkat, 2015; Chang, 2009; Lin, 2005; Pham, 2020; Shang, 2017). To be more specific, empirical studies (e.g., Chong, 2020; Pham, 2020) found that the use of asynchronous computer-mediated condition could help low level learners engage more actively in second language learning activities since they were under less cognitive pressure to initiate an interaction and respond to others' questions. Based on the cognitive load theory, the capacity of working memory is limited, and can be under pressure by the complexity of the content of task (intrinsic load), the characteristics of learners (germane load), and the instructional procedures (extraneous load) (Shepherd & Bolliger, 2011). In the case of the present study, the only difference between the two conditions was related to the extraneous load, which dealt with the procedures of accomplishing the tasks. The results of this study showed that this difference resulted in learners' higher level of satisfaction with the computer-mediated condition as it provided a less-threatening atmosphere for them to exchange opinions and provide feedback on their peers' performance. These perceptions seem to be in line with learners' higher number of social engagement indicators in the computer-mediated speaking tasks.

According to the triangulated data, the learners also showed their higher level of emotional engagement with the computer-mediated speaking tasks by mentioning the higher number of learning opportunities in this condition due to the better emotional condition. The interview data showed that learners believed that more language-related episodes were provided in the online condition. Language-related episode is derived from languaging, which refers to learners' use of language as a mediator to objectify their knowledge (Swain, 2006). Swain et al. (2010) argue that languaging is an indicator of learners' meaning-making endeavor and their higher mental involvement in the language learning process. Languaging, which is identified by language-related episodes, is reported to have significant effects on learners' second language development (Lin, 2019). In the present study, the interview data showed that learners were more satisfied with the computer-mediated condition as it provided them with more language-related episodes. It seems that learners' sense of learning (and having more learning opportunities) through language-

related episodes resulted in their higher level of emotional engagement with computer-mediated speaking tasks.

As it was evident in this study and reported in previous studies (Han & Hyland, 2015; Huisman et al., 2018; Zhang & Hyland, 2018; Zhang, 2020), different aspects of learner engagement with language learning tasks seem to be interconnected, and the increase in one of the dimensions can affect the other one(s). Some signs of this interconnectedness were observed where learners showed their satisfaction with a condition because of their successful learning experiences. On the other hand, the participants' interest in the computer-mediated tasks encouraged them to spend more time (behavioral engagement) and employ different cognitive and metacognitive strategies (cognitive engagement) to learn from the materials. In addition, the higher number of language-related episodes (behavioral engagement) was reported by the students to affect both emotional engagement and cognitive engagement.

Conclusions

The present mixed-methods study was conducted to occupy a niche in the literature on second language speaking. The findings of this study provided evidence for the positive effect of computer-mediated condition on L2 learners' emotional and social engagement with speaking tasks. These findings suggest that the modification in the design of a task can significantly affect learners' social and emotional engagement dimensions, which are reported to facilitate or debilitate the process of cognitive engagement, uptake (Dörnyei, 2019; Ellis, 2019).

The findings of this study indicated the superiority of the computer-mediated condition. As Storch (2013) argued, in comparative studies where conventional and computerized conditions are juxtaposed, the learners' outperformance in the computer-assisted condition can be attributed to the novelty effect. While a part of the differences can be related to the novelty issues, since the students had used this application for writing instruction purposes in semesters preceding this research project and were familiar with the condition, it can be cautiously said that novelty effect projected little or no effect on the results of this study.

Based on the findings of this study, the researchers recommend that second language teachers employ computer-mediated speaking tasks in their classes to enable learners engage with the tasks for longer amount of time and exchange more language-related episodes (behavioral engagement), which are reported to significantly improve learners' second language development. Furthermore, considering the interconnectedness of different engagement dimensions, second language teachers are advised to pay attention to different aspects of their tasks. They may conceptualize language learning tasks as a multi-faceted phenomenon, and organize the different aspects of task performance to maximize learners' social, behavioral, emotional, and cognitive engagement with tasks. Furthermore, teachers are invited to constantly check their students' engagement with tasks and modify their class (task) characteristics to provide their students with the optimum learning condition.

The data employed in this study were collected some days before the quarantine due to the outbreak of Covid-19 in Iran, and this condition avoided researchers from conducting stimulated-recall interviews to scrutinize the participants' behavioral engagement to have a more comprehensive picture of the issue, but other researchers can examine stimulated-recall interviews to pinpoint how changes in the task characteristic can affect learners' social, emotional, and cognitive engagement. Another limitation of this study was the examination of learners' emotional engagement after the term. Although this is a common research option in second language learning studies, other researchers can employ multimodal data of learners'

behaviors and gestures while performing the tasks to have a more thorough understanding of the moments (features) that negatively affected learners' emotional engagement.

References

Amiryousefi, M. (2017). The differential effects of collaborative vs. individual prewriting planning on computer-mediated L2 writing: Transferability of task-based linguistic skills in focus. *Computer Assisted Language Learning, 30*(8), 766-786.

Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to research in education*. Cengage Learning.

Aubrey, S., King, J., & Almukhaild, H. (2020). Language learner engagement during speaking tasks: A longitudinal study. *RELC Journal*, 1-15.

Blake, R. (2017). Technologies for Teaching and Learning L2 Speaking. In C. Chapelle & S. Sauro (Eds.), *The Handbook of Technology and Second Language Teaching and Learning* (pp. 107–117). John Wiley & Sons Inc.

Castañeda, D. A. (2019). Improving conversational interactions with task-based activities in a Spanish as a second language class, *Computer Assisted Language Learning*, 1-28. doi:10.1080/09588221.2019.1666149.

Chang, F. (2009). Peer review through synchronous and asynchronous modes: A case study in a Taiwanese college English writing course. *JALTCALL Journal*, *5*(1), 45-64.

Chong, L. D. (2020). The Linguistic Perspectives on Computer Mediated Communication. *Beyond Words, 8*(1), 24-35.

Chong, S. W. (2020). Reconsidering student feedback literacy from an ecological perspective. *Assessment & Evaluation in Higher Education, 46*(1), 92-104.

Christenson, S. L., Reschly, A. L., & Wylie, C. (Eds.). (2012). *Handbook of research on student engagement*. Springer Science & Business Media.

Csikszentmihalyi, M., & Csikzentmihaly, M. (1990). *Flow: The psychology of optimal experience*. Harper & Row.

Dao, P. (2019). Effects of task goal orientation on learner engagement in task performance. *International Review of Applied Linguistics in Language Teaching*. Advance online access. doi:10.1515/iral-2018-0188

Dao, P. (2020). Effect of interaction strategy instruction on learner engagement in peer interaction. *System, 91*, 102244.

Dao, P., & McDonough, K. (2018). Effect of proficiency on Vietnamese EFL learners' engagement in peer interaction. *International Journal of Educational Research, 88*, 60-72.

Derakhshan, A., Khalili, A. N., & Beheshti, F. (2016). Developing EFL learner's speaking ability, accuracy and fluency. *English Language and Literature Studies, 6*(2), 177-186.

Dörnyei, Z. (2019). Towards a better understanding of the L2 learning experience, the Cinderella of the L2 motivational self-system. *Studies in Second Language Learning and Teaching, 9*(1), 19-30.

Ellis, R. (2019). Towards a modular language curriculum for using tasks. *Language Teaching Research, 23*(4), 454–475.

Embi, M. A. (2011). *Web 2.0 social networking tools: A quick guide*. Pusat Pembangunan Akademik, Universiti Kebangsaan Malaysia.

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109.

Guillén, G. (2015). Awareness and corrective feedback in social CALL, Tandems, and E-Tandems. *IALLT Journal of Language Learning Technologies, 44*(2), 1-42.

Hall, G. (2017). *Exploring English language teaching: Language in action*. Routledge.

Han, Y. (2017). Mediating and being mediated: Learner beliefs and learner engagement with written corrective feedback. *System, 69,* 133-142.

Han, Y., & Hyland, F. (2015). Exploring learner engagement with written corrective feedback in a Chinese tertiary EFL classroom. *Journal of Second Language Writing, 30,* 31-44.

Hiver, P., Al-Hoorie, A. H., & Mercer, S. (Eds.). (2020). *Student engagement in the language classroom.* Multilingual Matters.

Hoomanfard, M. H., & Meshkat, M. (2015). Writing on a Computer and Using Paper and Pencil: Is there any Difference in the Internal Cognitive Processes? *GEMA Online® Journal of Language Studies*, *15*(2), 17-31.

Hoomanfard, M. H., & Rahimi, M. (2020). A comparative study of the efficacy of teacher and peer online written corrective feedback on EFL learners' writing ability. *Zabanpazhuhi (Journal of Language Research)*, *11*(33), 327-352.

Hubbard, P., & Colpaert, J. (2018). Toward transdisciplinarity in computer-assisted language learning. C*alico Journal*, *36*(2), 81-99.

Huisman, B., Saab, N., Van Driel, J., & Van Den Broek, P. (2018). Peer feedback on academic writing: undergraduate students' peer feedback role, peer feedback perceptions and essay performance. *Assessment & Evaluation in Higher Education*, *43*(6), 955-968.

Humphreys, K. L., Nelson, C. A., Fox, N. A., & Zeanah, C. H. (2017). Signs of reactive attachment disorder and disinhibited social engagement disorder at age 12 years: Effects of institutional care history and high-quality foster care. *Development and psychopathology*, *29*(2), 675-684.

Jafarigohar, M., Hoomanfard, M. H., & Jalilifar, A. (2018). A typology of supervisor written feedback on L2 students' Theses/Dissertations. *Iranian Journal of Applied Linguistics*, *21*(2), 43-87.

Kim, H. Y. (2020). Multimodal input during technology-assisted teacher instruction and English learner's learning experience. *Innovation in Language Learning and Teaching*, 1-13.

Krashen, S. (1987). *Principles and Practice in Second Language Acquisition*. Englewood Cliffs, NJ : Prentice Hall International.

Kuh, G., Cruce, T., Shoup, R., Kinzie, J. and Gonyea, R. (2008). Unmasking the effects of student engagement on first year college grades and persistence, *Journal of Higher Education, 79*(5), 540–563.

Lantolf, J. P., & Poehner, M. E. (2011). Dynamic assessment in the classroom: Vygotskian praxis for second language development. *Language teaching research*, *15*(1), 11-33.

Lin, A. M. (2019). Theories of trans/languaging and trans-semiotizing: Implications for content-based education classrooms. *International Journal of Bilingual Education and Bilingualism*, *22*(1), 5-16.

Lin, J.Y. (2005). Synchronous and asynchronous conferencing: A comparison of two modes of online ESL peer response and their effects on student talk and subsequent text revision. *Dissertation Abstracts International, 66*(7), 25-48.

Lin, Y. L. (2020). A helping hand for thinking and speaking: Effects of gesturing and task planning on second language narrative discourse. *System*, *91*, 102243.

Litman, D., Strik, H., & Lim, G. S. (2018). Speech technologies and the assessment of second language speaking: Approaches, challenges, and opportunities. *Language Assessment Quarterly*, *15*(3), 294-309.

Litman, D., Strik, H., & Lim, G. S. (2018). Speech technologies and the assessment of second language speaking: Approaches, challenges, and opportunities. *Language Assessment Quarterly*, *15*(3), 294-309.

Long, M. H. (1981). Input, interaction, and second language acquisition. *Annals of the New York academy of sciences*, *379*(1), 259-278.

Luoma, S. (2004). *Assessing speaking*. Ernst Klett Sprachen.

Mahmoudikia, M., Hoomanfard, M. H., & Izadpanah, M. A. (2014). Factors affecting ICT use in Iranian classes: a literature review. *International Journal of Language Learning and Applied Linguistics World*, *6*(1), 203-214.

Mokhtar, F. A., & Dzakiria, H. (2015). Illuminating the potential of Edmodo as an interactive virtual learning platform for English language learning and teaching. *Malaysian Journal of Distance Education*, *17*(1), 83-98.

Natriello, G. (1984). Problems in the evaluation of students and student disengagement from secondary schools. *Journal of Research and Development in Education*, *17*(4), 14-24.

Parmaxi, A., & Demetriou, A. A. (2020). Augmented reality in language learning: A state of the art review of 2014–2019. *Journal of Computer Assisted Learning*, *36*(6), 861-875.

Parmaxi, A., Zaphiris, P., & Ioannou, A. (2016). Enacting artifact-based activities for social technologies in language learning using a design-based research approach. *Computers in Human Behavior*, *63*, 556-567.

Pavlenko, A. (2008). Emotion and emotion-laden words in the bilingual lexicon. *Bilingualism: Language and cognition*, *11*(2), 147-164.

Payne, S., 8c Whitney, P. J. (2002). Developing L2 oral proficiency through synchronous CMC: Output, working memory, and interlanguage development. *CALICO Journal*, *20*, 7-32.

Pham, H. T. P. (2020). Computer-mediated and face-to-face peer feedback: student feedback and revision in EFL writing. *Computer Assisted Language Learning*, 1-37.

Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, *36*, 50-72.

Reeve, J. (2012). A self-determination theory perspective on student engagement. In S. L. Christenson, A. L. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149–172). Springer.

Schunk, D. H., & Mullen, C. A. (2012). Self-efficacy as an engaged learner. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 219-235). Springer.

Shang, H. F. (2017). An exploration of asynchronous and synchronous feedback modes in EFL writing. *Journal of Computing in Higher Education*, *29*(3), 496-513.

Shepherd, C. E., & Bolliger, D. U. (2011). The effects of electronic portfolio tools on online students' perceived support and cognitive load. *The Internet and Higher Education*, *14*(3), 142-149.

Shokrpour, N., Mirshekari, Z., Moslehi, S., & Popescu, M. (2019). Learning vocabulary electronically: Does computer assisted language learning (CALL) instruction have any impacts on Iranian EFL learners?, *Cogent Education*, *6*(1), 1702827. https://doi.org/10.1080/2331186X.2019.1702827.

Skinner, E. A., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology*, *100*, 765–781.

Storch, N. (2013). *Collaborative writing in L2 classrooms*. Multilingual Matters.

Swain, M. (2006). Languaging, agency and collaboration in advanced second language learning. In H. Byrnes (Ed.), *Advanced Language Learning: The Contributions of Halliday and Vygotsky* (pp. 95–108). Continuum.

Swain, M., Lapkin, S., Knouzi, I., Suzuki, W., & Brooks, L. (2010). Languaging: University students learn the grammatical concept of voice in French. *The Modern Language Journal*, *93*(1), 5-29.

Tsai, P. H. (2019). Beyond self-directed computer-assisted pronunciation learning: a qualitative investigation of a collaborative approach. *Computer Assisted Language Learning*, *32*(7), 713-744.

Walsh, S. (2006). *Investigating classroom discourse*. Routledge.

Zhang, R., & Zou, D. (2021). A state-of-the-art review of the modes and effectiveness of multimedia input for second and foreign language learning. *Computer Assisted Language Learning*, 1-27.

Zhang, Z. V. (2020). Engaging with automated writing evaluation (AWE) feedback on L2 writing: Student perceptions and revisions. *Assessing Writing*, *43*, 103-123.

Zhang, Z. V., & Hyland, K. (2018). Student engagement with teacher and automated feedback on L2 writing. *Assessing Writing*, *36*, 90-102.

Zou, B., & Thomas, M. (2019). *Recent developments in technology-enhanced and computer assisted language learning*. Hershey, Pennsylvania: IGI Global.