Tapping into Software for Oral Communication: A Comparative Study of Adobe Connect and Skype

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Abstract Despite the theoretical importance of online learning, there is a lack of research on oral communication skills. The present study, adopting a mixed-methods design, aimed at 1) examining whether Adobe Connect and Skype could improve listening skills for pre-intermediate EFL learners and 2) exploring the students' reactions to the role of online learning in enhancing their listening skills. In doing so, a pool of 30 homogeneous Iranian pre-intermediate students participated in the study. The one-way ANCOVA results confirmed a statistically significant difference at the $p<.05$ level in students' scores for the two sets of scores. Adobe Connect group outperformed the Skype group concerning listening skills. Moreover, taking the coding reliability and agreement into account, 14 common codes emerged from the students' responses to the semi-structured interview questions regarding the role of online learning in listening development. Finally, practical implications are offered for EFL students, teachers, and syllabus designers.

Keywords: Listening skills, Computerized materials, Online learning, Technology, Oral communication

1. Introduction

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As a means of oral communication, listening comprehension is effective in people's everyday lives; however, listening is supposed to be the least apparent language skill, making it the most challenging skill to acquire (Vandergrift, 2004). According to Akbari and Pishghadam (2022), language as a prime means of communication embodies various unknown features that would be difficult to explore without implementing technology. Much of the current literature indicates an increased interest in integrating technology into second language (L2) teaching and learning (Ulla et al., 2020; Lin et al., 2016). For Warschauer (2004), language learning has witnessed a remarkable movement from traditional text-based materials to more hands-on computer-based materials. Computer-aided materials are some of the manifestations of computer-assisted language learning (CALL), which refers to "the search for and study of applications on the computer in language teaching and learning" (Levy, 1997, p. 1). Likewise, recently,

students are inclined to implement computerized tools such as the internet and email in their learning (Modarresi & Jalilzadeh, 2020).

Recent developments in L2 learning and teaching have led to a growing recognition of computerized and internet-based materials for listening and speaking as oral communication skills (Al-Kadi, 2018; Modarresi & Alavi, 2014). For example, Chapelle (1998) referred to a list of 13 CALL handbooks focusing on structural and communicative CALL. The teacher usually acts as scaffolding between the computer and the learners (Felix, 2001; Gruba, 2004). Similarly, Douglas (2010) pinpoints the usefulness of technology and technological multimedia capabilities in L2 communicative situations. The rapid expansion of technology signifies the application of computer-based tools in L2 settings.

Indeed, recently, considerable literature has grown around the theme of computer-aided materials, especially online learning in the L2 classroom settings (Esfijani, 2018). However, the major problem is that L2 learners are not thoroughly acquainted with using software tools in their learning practice and seem to have a phobia about working with such software tools. This may be because they are not equipped with technological devices in the classroom. They are most likely accustomed to paper-based materials in the classes. In contrast, technology's economic and educational development reaffirms the need for L2 learners to learn how to work with them. To tackle this problem, this study mainly attempts to determine the effectiveness of two computerized tools entailing Adobe Connect and Skype in making oral communication practice more effective. Adobe Connect, as a web communication system, is commonly used by universities for online teaching and learning (Bower, 2011), and Skype is a free videoconferencing application that can be downloaded and operated through a peer-to-peer linking computer over an internet connection for teaching purposes (Karabulut & Correia, 2008).

2. Theoretical Framework

2.1. Listening as a Communication Skill

The existing literature acknowledges listening proficiency as a central component of foreign language teaching and learning (Vandergrift, 2004). It is generally considered the *Cinderella* skill of second language instruction (Nunan, 1997). Indeed, listening is recognized to come before speaking, and according to Nation and Newton (2009), "the early stages of language development in a person's first language (and in the naturalistic acquisition of other languages) are dependent on listening" (p. 37). Nevertheless, research in listening comprehension is "still in its infancy" (Omaggio-Hadley, 2000, p. 184). A lack of L2 research into listening and oral communication skills has been recurrently highlighted (Khorami & Modarresi, 2019; Vandergrift, 2005). In this regard, Vandergrift (2005) declares that L2 teaching practices have mostly emphasized speaking, reading, and writing as the skills one needs to develop for successful language acquisition. However, much of the current literature pays particular attention to the role of listening skills as an essential element in facilitating language learning (Vandergrift, 2007).

Hasan (2000) maintains that despite its importance, L2 learners frequently treat listening as the most challenging language skill to learn, and, as Vandergrift (2007) suggested, one of the reasons for this could be that learners do not know how to learn listening successfully. However, some cross-sectional studies recognize listening as an essential oral communication skill that promotes language development (Khakshour Forutan & Modarresi, 2018; Rost, 2002). Listening has replaced its role from a passive activity with less class time to an active communication process (Vandergrift, 2004). Nevertheless, the learning environment in foreign language learning is not as scaffolding as that of the first language acquisition. In this respect, Vandergrift (2005) remarks that whereas listening is treated as an active mental process, it is still challenging to describe. Moreover, Rost (2002) pinpoints the complexity of the listening comprehension process, declaring that we cannot teach and assess listening skills unless we apprehend how that process works. For Rost (2002), most current studies germane to L2 listening skills have focused on the product-oriented models that evaluate listening ability through quantitative research methods.

Vandergrift (2007) declares that quantitative approaches to conducting research into listening skills can provide us with information about the product; however, they are not able to inform us about the process, that is, how listeners come to the correct answer or why comprehension breaks down. In this regard, Lund (1990) emphasized listener function, which refers to the aspects of the massage that the learner tries to process, entailing six significant tasks: identification, orientation, primary idea comprehension, detail comprehension, complete comprehension, and replication. Moreover, Ur (1984) categorized listening into two types Listening for perception and listening for comprehension. Following the guidelines suggested by Bachman and Palmer's (1996) model of communicative language ability, Buck (2001) developed a model for the listening construct that is regarded as one of the most frequently cited models in assessing listening comprehension. In this model, different types of knowledge, including linguistic and non-linguistic knowledge, are considered.

2.2. The Role of Technology in SLA

Historically, as reviewed by Tafazoli and Golshan (2014), computer-assisted instruction was initially proposed by scholars in the 1950s for purposes other than language teaching. According to Delcloque (2000), the origin of CALL can be traced back to the 1960s, along with the increasing emergence of personal computers that led to the development of CALL programs and several publications in the late 1970s (Davies, 2000). According to Beatty (2013), whereas the history of CALL research is brief enough to be well-documented, it belongs to an area of study lacking scientific rigor; CALL is regarded as a branch of applied linguistics that is still establishing its directions. Indeed, although technology has a long history in education, its usefulness in language learning and teaching appeals to language learners, teachers and researchers. Beatty (2013) declared that CALL could shape an integral part of the teaching courses for language learning.

As the previous studies related to CALL have focused on the association between technology and pedagogy (Adarbah & Goode, 2022), Warschauer and Healey (1998) categorized CALL into three phases entailing Behaviorist CALL, Communicative CALL, and Integrative CALL (Multimedia and the Internet). Likewise, Bax (2003) classified CALL into three phases restricted, open and integrated. The existing literature acknowledges several other attempts to classify the history of CALL, such as Esling (2013), in the context of secondary schools, outlined a list of task-based CALL activities to improve productive email exchanges between the teachers who were encouraged to express their views, describe photographs, and give directions with the help of computer software. Employing integrative CALL, Debski (2000) investigated the effectiveness of networked computers in engaging students in collaborative tasks and found a positive relationship between learning processes, objectives, and students' ownership of the outcomes. Indeed, accompanying the mainstream computer-supported collaborative learning (Land & Hannafin, 2000), the field of L2 learning and teaching has highlighted the importance of software for improving oral communication, and two of the software applications that the teachers mostly employ in the Iranian context are Adobe Connect and Skype.

Universities frequently employ Adobe Connect as a web communication system for pedagogical purposes, and the students can easily download the software or join the class by following the link (Karabulut & Correia, 2008). Its platform has several components that are useful for teachers, including the ability to interact orally and virtually with the students, upload PowerPoint slides and FlashPaper files, share a single window or the entire desktop with the students, to send text messages to all or selected students, and to share files from the teacher (Bower, 2011). Skype is a videoconferencing application that can be used for visual representations of materials, and it is well-suited to Windows platforms. When installed on computers, students can call or receive calls from other Skype users and/or landline and cellular phones (Karabulut & Correia, 2008). Skype is equipped with video messaging, instant messaging, file sharing, and screen sharing.

3. Methodology

3.1. Participants

A pool of 30 Iranian pre-intermediate students (class A=15, and Class B= 15) (females: n=18, 60%; males: n=12, 40%; Mean age= 20.46, SD=1.87) participated in the study at the Andishe Sazan private English institute in Quchan city, located in the northeast of Iran. They were EEL learners and had already studied English in the last ten terms. They had four hours of English per week with an English instructor. To ensure the homogeneity of the subjects in terms of their language knowledge, those learners whose mean scores on KET Test for Schools were one standard deviation above or below the mean participate in this study. Moreover, they were asked to participate in the pre-test of listening comprehension skills. During the course, the teacher worked on "*American English File 2*", written by Latham-Koenig et al. (2013).

3.2. Instrumentation

KET Tests for Schools, designed by Cambridge English Language Assessment for school (2001), were employed to measure the learners' language ability. The test measures four basic language skills: listening, speaking, reading, and writing. However, the researchers used the listening and speaking sections of the test to homogenize the students. The listening test includes five sections and 25 questions. Each question carries one mark; therefore, the scoring procedure is calculated out of 25. Moreover, the listening sections of two distinct KET tests for schools developed by Cambridge English Language Assessment for school (2001) were used to measure the learners' performance on the pre-test and post-test. Each test consisted of 25 question items, and their scores were calculated out of 25.

The researchers constructed four semi-structured questions to explore the students' reactions to the role of online learning in enhancing their listening skills. The contents of the questions included their familiarity with the computerized tools, the influence of software applications on their motivation, involvement, and progress, and the pitfalls of online learning. Three experts checked the content validity of the questions in English language teaching, which had taught English courses at the Islamic Azad University of Quchan. Having received the feedback from the experts, the researchers rechecked the questions to assure their validity. The findings from the interviews also indicated that the items enjoyed dependability because the results showed consistency too.

3.3. Procedure

The study adopted a straightforward procedure to carry out the analysis. Before the treatment phase, the learners became homogenous using KET Test. Following this, they were randomly assigned into two groups, experimental group A and experimental group B. Students' scores on the listening section of the KET Test were used as the pre-test scores.

During the treatment phase, which lasted for fifteen sessions, the students came to the online classes twice a week, and each session lasted 90 minutes. The treatment sessions were held during the pandemic spread of Coronavirus. One group was exposed to Adobe Connect (N=15), and the other was exposed to the Skype application (N=15). Learners in both groups were required to install the software on their personal computer or Laptop to use computer-aided materials simultaneously, including the text, the audio, and the video features. The teacher worked with the learners on the audio listening clips selected from their class textbook "*American File 2*", and the materials were presented through web-based tools. The learners were asked to reproduce what was said in the audio clips.

In experimental group A, the teacher utilized several components within the virtual class's Adobe Connect, including uploading PowerPoint slides, sharing a file with the whole class, sending text messages to all or selected learners, and presenting the materials orally and virtually. In experimental group B, the same teacher made use of components of Skype entailing video messaging, instant messaging, file sharing, and screen sharing.

Following the treatment, the teacher distributed the post-test of listening skills, including 25 items, to see if there was any significant difference between the two groups. Following this, four learners were

interviewed based on the data saturation method to collect their responses to the interview questions regarding the role of online learning in enhancing their listening skills (Dörnyei, 2007). They were free to reply to the questions in English or Persian using their native language; some could express themselves more quickly and precisely.

As for the first research question of the study regarding whether the online applications, including Adobe Connect and Skype, could enhance listening skills for pre-intermediate EFL learners, the researchers performed one-way ANCOVA since there was one dependent variable and one independent variable with two levels. As for the study's second research question concerning the participants' responses to the interview regarding the role of online learning in enhancing their listening skills, the researchers opted for a "theme-based procedure" (Dörnyei, 2007) to categorize the responses obtained from the interviewees. Following the guidelines proposed by Garrison et al. (2006), the researchers finally determined the inter-rater agreement and inter-rater reliability for coded transcripts.

The Chartered Institute of Management Accounting (CIMA), the Chartered Institute of Marketing (CIM), and the British Computing Society (BCS) all participated in qualitative interviews for this study, which utilized a mixed-methods approach. They were two senior males aged 40 to 60 and one old female aged 40 to 45; they had 20 years of experience assisting students at professional bodies. Students enrolled at Gulf College, Oman, and those who had previously attended the institution were asked to participate in an online survey. There were 221 students, with 129 males between the ages of 18 and 30 and 92 females between the ages of 31 and 40. The sample was done in a way that was convenient and easy to obtain.

4. Results

4.1. Adobe Connect vs. Skype and Listening Skills

The study's first objective was to examine whether Adobe Connect and Skype are conducive to listening skills for pre-intermediate EFL learners. To achieve this objective, the researchers compared the pretest scores with the posttest for each learner in both groups. Before running One-way ANCOVA, several assumptions were needed, including the linearity for each group and the homogeneity of regression slopes (Tabachnick & Fidell, 2001). There had been no sign of a curvilinear relationship because the association was linear; thus, there was no violation in the assumption of the linear relationship. Moreover, there was no violation of the assumption of homogeneity of regression slopes since the significance value was .73, safely above the cut-off.

Table 1
Descriptive Statistics for Both Groups

Group	Mean	Std. Deviation	N
Adobe Connect	16.53	2.26	15
Skype	14.20	2.59	15
Total	15.36	2.67	30

As displayed in Table 1, the results of descriptive statistics showed that the mean score of the Adobe Connect group was 16.53 with a standard deviation of 2.26, and the mean score of the Skype group was 14.20 with a standard deviation of 2.59. The number of participants in each group was 15. Although learners who utilized Adobe Connect indicated an increase in their listening scores compared to those equipped with Skype, the researchers ran One-way ANCOVA to determine if the difference was statistically significant.

Table 2
ANCOVA Test for Scores

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	171.90[a]	2	85.95	66.18	.00	.83
Intercept	19.65	1	19.65	15.13	.00	.35
pretest	131.06	1	131.06	100.92	.00	.78

group	9.78	1	9.78	7.53	.01	.21
Error	35.06	27	1.29			
Total	7291.00	30				
Corrected Total	206.96	29				

a. R Squared = .831 (Adjusted R Squared = .818)

As displayed in Table 2, the results of ANCOVA confirmed that there was a significant difference in the students' scores on listening skills for learners in the Adobe Connect group and Skype group after controlling for scores on the pretest administered before the intervention. The significant value was .01, less than .05; thus, the groups differed significantly. Taking the mean scores of the two groups, the Adobe Connect group outperformed the Skype group concerning listening skills.

4.2. Results Obtained from the Interviews

As for the study's second objective regarding EFL learners' reactions to the role of online learning in their listening skills, the researchers held interview sessions with four students based on the data saturation method. Some of the students' comments and statements are reported below:

The interviews with the students who utilized Adobe Connect revealed that the students initially became confused since working online was a new and challenging experience. They were not familiar with computer-mediated tools to work on listening skills. The first learner said, "*I already believed that online learning was a waste of time, but gradually, I found it helpful in such a difficult situation that we have because of Corona Virus. The teacher tried to write notes and share the audio and the related text with us. One problem was the slow internet speed and the connection breaking up*".

Another student believed using internet-based tools was tedious since there was no interaction. However, she said it helped listen to skills since, unlike speaking skills, working on listening skills does not require much face-to-face social interaction. The second learner mentioned, "*While listening to the clips, I came across words that were difficult to understand, and the teacher was there to help, and I could chat with him easily*".

Moreover, the interviews with the students who used Skype revealed that the experience was enjoyable; however, they were not focused while the teacher assessed them because they had insufficient attention. Of course, as they said, they had a minor internet problem. The third learner noted, "*The experience was enjoyable since I could listen to the texts provided by the teacher, and I felt no stress at home. I would like to be alone while studying. However, the need for extra equipment was a problem, and it was hard for me to answer the questions myself*".

The last learner interviewed felt that Skype was a new environment, but she preferred to return to the regular class as soon as possible. She said, "*I think we are not used to working on language via online courses, and I tried to exert more effort, but I must have spent much more time getting acquainted with virtual learning*".

Finally, having coded the data, the first researcher of the current study provided the second person with the data to code. After that, the second researcher elicited the common themes and coded the responses. Because the two coders arrived at the same conclusion, the inter-coder agreement of the findings was taken care of. To this end, as Campbell et al. (2013) initially proposed, the researchers divided the number of coding agreements by the number of agreements and disagreements combined. Of the 23 common themes, there were 17 codes that both researchers had invoked a code. Therefore, the overall level of inter-coder reliability would have been 73 percent (17/23= .73). However, after discussion, they agreed on 14 codes so that inter-coder reliability increased to 82 percent (14/17=.82).

Table 3
Common Themes Emerged from the Interviews

Participants	Themes
Adobe Connect	1) new, 2) challenging, 3) confusing, 4) tedious, 5) not much need for face-to-face interaction, 6) internet speed problems, 7) more concentration, and 8) lack of computerized tools

Skype	1) insufficient attention, 2) interesting, 3) hard to work, 4) time-consuming, 5) new environment, and 6) lack of extra equipment

5. Discussion

The results of the present study showed a significant difference in the students' listening scores for the EFL students exposed to different internet-based applications, and the Adobe Connect group was confirmed to perform better than the Skype group. The interviews with the students also revealed that the students in the Adobe Connect group had a more positive reaction than those in the Skype group as the experience was new, challenging, and more concentrated.

Taking the study's first objective into account, the present study is aligned with the previous works, such as the study carried out by Fotos and Browne (2004). They demonstrate that online teaching contributes substantially to the development of language learning. Students want to work with computer resources and computer-based tools such as Adobe Connect and Skype. Similarly, according to Lamy and Goodfellow (1999), the idea that computer-aided programs can act as scaffolding providing the learners with appropriate feedback, is exciting and arguably deserves further attention. The results of the present study also yielded that computer-based tools can enhance students' listening skills, which agrees with the previous research conducted by Preece et al. (2002). They found that providing both support from the teachers and feedback from the automatic computer assists learning. The present study also emphasized that software has been effective in their classrooms and teaching methods.

Taking the study's second objective into account, the study's results are consistent with the qualitative research conducted by Al-Badi and Khan (2022). They found that establishing an on-premise or custom enterprise resource planning system for an institution is helpful for customization, time, and cost. The results of the present study's interviews showed that online learning could provide a new environment for the students that would be more interesting to them than traditional text-based instruction. This viewpoint has already been supported by the previous research conducted by Lambropoulos et al. (2006), who confirmed that computerized means enhance the opportunities for interactive learning. The present study focused on the use of software for oral communication. It confirmed that online tools could promote learning development so that they can be integrated into the individual life of the learners, helping them learn English independent of time and place. The study results revealed that some students have no access to extra equipment because of socio-economic problems, so the socio-economic status of the learners should be taken into account, which has already been accentuated by Pishghadam et al. (2022).

The empirical findings in this study provide a new understanding of the role that online learning can play in the Iranian context to foster students' learning development, and the researchers concluded that learners have inclined to work on the English language using internet-based applications; however, the combination of human resources and computer-aided resources is what has been highlighted by Yaghooti et al. (2015) who declare that Iran's culture would allow the replacement of EFL teachers with technology at least in another fifteen years. Indeed, learners who have mastery over the computer, internet, and typing skills are more successful in improving their language skills. The fact of the matter is that learners who know how to work with computer-aided tools are more successful in the classroom and international settings on internet-based tests because they are required to answer the questions in front of the computer. As Bocar and Joscon (2022) commented, using social media platforms as communication tools can positively and negatively affect people's lifestyles. The results of the present study revealed that the appropriate use of technology is conducive to oral communication development.

The results of the present study can offer pedagogical implications for L2 learners, teachers, and syllabus designers. As for L2, learners should know computer-aided tools and internet-based applications and exchange information with other learners and their teachers using such tools as computerized versions of second language acquisition. L2 teachers are expected to participate in workshops and conferences on online learning to become more familiar with the emerging technological tools and utilize them in their classrooms. They are recommended to assist learners in expressing themselves through social networks and teach them how to use internet-based applications.

As for syllabus designers, they are suggested to design materials suitable for online learning and provide students with online programs and activities to work on English communication skills at home. To improve communication skills, different factors could be incorporated into computerized materials. For example, other senses must be integrated into the textbooks to enhance communicative skills (Ebrahimi et al., 2022).

Although the current study yields valuable insights, it includes some limitations and recommendations for future research. Firstly, regarding the external generalizability of the findings, care should be taken because the sample does not include all L2 learners in private institute situations. Second, the study had no control group in the experiment because of the few students available. In this respect, Mackey and Gass (2016) note that although the inclusion of a control group is typically endorsed, using a control group might not be possible for practical reasons. Finally, as to the effectiveness of software for oral communication, there is a need for conducting further research on the role that emotioncy, as the blend of emotion and frequency of senses (Miri & Pishghadam, 2021), plays in the use of software applications to find out the difference between Adobe Connect and Skype in the light of emotioncy-based language education (Pishghadam et al., 2016). More research can be conducted on how software tools are conducive to developing writing communication and willingness to communicate from a socio-psychological perspective.

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