



EFL Learners' Anxiety When Using LMS and WhatsApp: A Mixed-methods Study

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Introduction

The integration of technology in language curriculum has grown widely during the past decades (White, 2003). As a result, educators and researchers have begun to take advantage of the benefits of digital sources to both keep up with this rapid development and also enrich the language learning experience. Computer-assisted language learning (CALL) has been a persistent concern among educationists since technology, if used wisely, can play a major role in enhancing L2 learning outcomes. Whether technology fulfills this promise depends on how it is used in the curriculum. The interactive nature of language learning requires a sound integration of different technological devices with the learners' characteristics such as technological literacy, psychological states, etc.

Despite many studies which have investigated the benefits of CALL for foreign language pedagogy (Blake, 2009; Cummins & Davesne, 2009; Hafner & Miller, 2011; Kárpáti, 2009; Laborda, 2009; Mompean, 2010), few studies have investigated the anxiety caused by the application of technology in language learning contexts. Anxiety has always been considered as an important factor in the teaching and learning of foreign languages (Huang & Hwang, 2013; Kim, 2018). Its effect on the learners' motivation and performance is undeniable (Ahmetović et al., 2020; Dervić & Bećirović, 2019; Horwitz et al., 1986; Jones, 2004). During the COVID-19 pandemic, almost all educational activities including teaching and learning foreign languages shifted to the online mode. Such an abrupt shift occurred while teachers and students were not prepared. The present study reports on an attempt to compare two common online modes (i.e. LMS & WhatsApp) in the Iranian EFL context to discover which mode caused more anxiety for the students. Hence, for this aim the following two research questions were posed in this study:

1. Are there any differences between the students' foreign language classroom anxiety induced by WhatsApp and LMS?
2. How do the students perceive their online language learning using either WhatsApp or LMS?



Literature review

According to Krashen's affective filter hypothesis (1981, 1982), anxiety is defined as an affective factor which acts as a filter in the learners' mind and blocks linguistic input. In this way, it can impede the language learning process. Based on Horwitz et al. (1986), there are three types of anxiety in the foreign language classroom: (a) communication apprehension which refers to the anxiety connected with the real or predicted interaction with others (McCroskey, 1984), (b) fear of negative evaluation, which results from the fear of being evaluated by others, particularly negative evaluations and fear of receiving these evaluations (Watson & Friend, 1969) and (c) test anxiety, that describes the fear of inadequate performance in exams and its consequences (Sarason, 1984). Many studies have shown the negative relationship between learners' performance and their anxiety in foreign language learning (Alrabai, 2015; Elkhafaifi, 2005; Horwitz, 1986; Sellers, 2000; Zhao et al., 2013; Zheng & Cheng, 2018). Moreover, scholars found that students frequently experience anxiety to some level (Saito & Samimy, 1996); as a result, anxiety has become a key factor in determining students' academic success. To measure the learners' anxiety in pedagogical settings, Horwitz et al. (1986) developed the Foreign Language Classroom Anxiety Scale (FLCAS).

Online learning became the prevalent learning mode during the COVID 19 pandemic. Here teachers and students stay connected and engaged while working from home. It can even include sending educational materials and activities to students who do not have access to technology. However, there are several factors which negatively affected online language learning activities. For example, students were not prepared for the new learning environment which required them to study under stressful conditions. In addition, learners lacked understanding of instructional technology, and many lacked the desire to study online, which necessitated self-discipline and a larger sense of responsibility for their own learning (Russell & Murphy-Judy, 2020; White, 2003). Online learning, on the other hand, often requires continual involvement from students using audio and video technologies. As a result, they may be more anxious about both language acquisition and utilizing technology to communicate in a foreign language (Pichette, 2009). In addition to these, the students' involvement in the new circumstances caused by the global crisis added to their anxiety levels.

The literature shows studies conducted to compare the effect of online classes compared with face-to-face classes on learners' anxiety. As an example, Pichette (2009) conducted a study with a group of 186 French speakers at three proficiency levels (beginner, intermediate and advance). The study showed that there were no differences in learners' anxiety between online and face-to-face classes. In particular, the study found that advanced learners experienced perceived lower anxiety compared with the intermediate and beginner learners in the online learning environment. Overall, the study showed that learners had lower anxiety after they had completed their first online language course as they had become more comfortable with learning platforms and pedagogical technologies. In another study by Russell (2018), it was found that the learner's engagement in synchronous conversation with native speakers can reduce learners' anxiety in an online class.

Han and Keskin (2016) and Shamsi et al. (2016) examined the impact of WhatsApp on decreasing foreign language students' speaking anxiety. Both studies revealed that enrolling in WhatsApp activities lowered the students' anxiety which in turn benefited the students' language acquisition. Another recent project (Ali & Bin-Hady, 2019) probed EFL students' attitudes, motivation, and anxiety about learning English using WhatsApp. The results revealed that WhatsApp had a great impact on lowering students' anxiety. Dhahir (2020) also assessed the usefulness of WhatsApp as an online learning medium. According to the findings, WhatsApp's usability was positively evaluated by the participants.

In sum, to the best of our knowledge, no study has been conducted so far to assess the level of anxiety among LMS and WhatsApp users. Hence, using a mixed-methods design, the present study was conducted to examine the learners' anxiety level through two more commonly used online platforms (WhatsApp and LMS) in the Iranian EFL context.

Methodology

Participants

A total of 62 Iranian students of English as a foreign language were randomly selected to participate in this study. The participants were aged between 13 and 18 years old and almost all of them were high school students. There were both male and female students in the study and they were at intermediate English language proficiency levels. Next, the participants were randomly assigned into either the LMS or WhatsApp groups. The students were informed about the aims of the study in advance, and they were assured that their identities and the data of the study would be kept confidential.

Design of study

The current study adopted a mixed-methods design. The students were first asked to complete the FLCAS questionnaire which was delivered to them via a web link. Next, some of the students were asked to participate in a follow up interview session.

Instruments

Foreign language classroom anxiety scale (FLCAS)

Horwitz (1986) developed the FLCAS and found this survey to be reliable (Cronbach Alpha = 0.93 and test-retest reliability, $r = 0.83$). She also found that FLCAS scores associated with all three of the measures used to build it, suggesting the instrument's validity. This instrument can be used in both classroom and online settings (Alla et al., 2020). It consists of 33 Likert scale items, where point 1 was "strongly agree" and 5, as "strongly disagree". The first part of the questionnaire required the participants to write their personal information such as their age, English proficiency level, gender, phone number and their online class modality (i.e., LMS or WhatsApp). The second part included the FLCAS main items.

Interview package

An online semi-structured interview was also prepared to investigate the perceptions of the learners about their particular online class setting. To develop the interview items, the researcher consulted the related literature and relied on her own teaching experiences in the learning context (Appendix).

Data Collection Procedure

The students who were assigned into LMS and WhatsApp groups were asked to fill out the FLCAS questionnaire. The questionnaire was translated into Persian (i.e., native language of the participants) to prevent any probable language hindrances. The translated version of the questionnaire was examined for accuracy and was found to have considerable agreement between the researchers and the expert colleague with regard to the translation of the questionnaire. Due to the pandemic, an online survey form was prepared via www.formaloo.ir. The online version of the questionnaire was then sent to the participants and they were asked to complete the questionnaire.

Similar to the questionnaire, the interview was also conducted in Persian. The researchers randomly selected 10 students from each group to participate in an interview session. The researcher sent the interview questions to the participants through WhatsApp and they were asked to send back their responses. The students were free to write their responses or send them through voice messages.

Data Analysis

The results of the FLCAS were analyzed using independent-samples *t*-tests. Moreover, the interview protocols were analyzed using the qualitative content analysis procedure.

Results

To address the first research question, an independent-samples *t*-test was used to compare the foreign language anxiety of the two groups. Table 1 shows the descriptive statistics of the two groups. As the Table shows the students in the LMS group experienced higher levels of anxiety as compared to the WhatsApp group. This was confirmed in Table 2. According to the results of Table 2, there was a significant difference between the LMS and the WhatsApp groups ($t = 2.519, p < .05$).

TABLE 1

Descriptive Statistics of LMS and WhatsApp Groups' Anxiety Scores

Platform	N	Mean	SD
LMS	32	91.80	17.30
WhatsApp	31	80.05	11.95

TABLE 2

Independent Samples T-Test for LMS and WhatsApp Groups on FLCAS

		Levene's Test for Equality of Variances				t-test for Equality of Means				
		<i>F</i>	<i>Sig.</i>	<i>t</i>	<i>df</i>	<i>Sig. (2-tailed)</i>	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Total	Equal variances assumed	4.679	.037	2.47	38	.018	11.75689	4.75218	2.13660	21.37719
	Equal variances not assumed			2.519	35.648	.016	11.75689	4.66675	2.28904	21.22474

To investigate the second research question, some of the participants were interviewed for their perceptions about their particular online platform. The analysis of the interview data revealed the following general categories:

- Learners' differing views on online platforms
- Learners' coping strategies with online platforms' anxiety

In both groups, the learners stated that they had experience of having foreign language anxiety but the majority of them stated that they experienced more anxiety and stress in the LMS class. However, they have different views about the platforms. One of the participants described his experience with LMS:

I think using LMS with poor connection makes us more anxious and nervous. It keeps removing us! We cannot understand what our teacher says. Also, there would be no access if we cannot understand something.

Another student with the same experience stated that:

I was constantly left behind and our class moves quickly. It's removing me all the time! It was bothering me that I couldn't comprehend what the teacher was saying at times.

Furthermore, the most stressful moments of the participants' classes in LMS were when they were required to answer questions immediately and without preparation. One of students stated:

I feel very anxious and frightened when my teacher asked me questions, and tell me to open my microphone quickly.

As the other student stated:

When my teacher asks me questions and tells me to open my microphone rapidly, I feel really worried and scared. I am really sluggish at acquiring new things and frightened of making mistakes.

Moreover, other students referred to the anxiety caused by online exams via LMS as so:

I am really anxious and disappointed for online English tests. It has very limited time and contains lots of questions. All the time I am worried about my internet connection and the time left! I got lower marks than the previous semesters.

My teacher assigns us a lot of challenging questions in a short amount of time. Most of the time, I lost track of time and the site was closed.

....the worst part was when the teacher made video calls and ask us oral questions. During this time, my phone's connection was really awful, and I missed my teacher's voice and video. She gave me a very bad mark!

However, there were students who believed that LMS can give them more confidence, especially for more proficient students. In addition, the availability of a strong internet connection and having an appropriate device along with familiarity to the platform provides a pleasant learning experience with the LMS for the students. Furthermore, having more intimate communication by using a webcam and a microphone is another important factor in reducing the learners' anxiety through LMS. One of the students in the LMS group put it as follows,

In my opinion, using LMS is better, because we can use our microphone or webcam to talk with our teacher face to face. It makes me feel more relaxed when I see my teacher. Also, it takes little time to upload medias.

On the other hand, in the WhatsApp group the students pointed to several benefits such as delayed feedback time, and learners' control of their learning which considerably lowered their anxiety level. However, the students perceived some drawbacks such as the huge number of incoming messages and poor internet connections which affected downloading the files.

The students were also asked about how they managed to reduce their anxiety when they participated in foreign language online classes and assessments. The following excerpts show some of these attempts:

We should study before the class to be more ready. During class, we can take notes, and if we do not really understand something due to a weak connection, we may ask our teacher to explain it again

or ask other students to assist us. Just pay careful attention to our teacher, and let him know if there is an issue.

Have positive attitude! Persuade all the students to be more supportive than making fun of other's mistakes. I believe we should not be frightened to make errors.

It is preferable to stay in contact with friends and ask them to support us whenever we encounter difficulties. I deeply enjoy talking about our lessons with my friend.

I usually go through my notes before class because it makes me feel more confident.

Discussion

The results showed that the students experienced more anxiety in the LMS setting. At one level this can be due to the emergent nature of synchronous online learning such as LMS which considerably enhances the fear of spontaneous speaking or even speaking with preparation in the online foreign language class. In fact, the students' pattern of responses revealed that both the particular nature of online communication and a lack of teachers' and peers' verbal affective support (Alla et al., 2020) can affect the anxiety level of the students. Similarly, the fear of being negatively evaluated and consequently the lower self-image experienced by the students was another factor which contributed to the enhanced anxiety level of the students in the LMS group. As evidence in this regard, learners' fear of making mistakes in online platforms like LMS in which the teacher may ask students for sudden written or oral responses may lead teachers to provide feedback and error correction which might have unpredictable consequences for the learners' psychological state.

Most of the participants were adolescents in this study. This implies that they might not be prepared for the virtual learning which proceeds in the absence of considerable physical interactions. Online learning requires the students to take responsibility for their learning. Lack of preparation for this new learning mode, poor internet connection, lack of eye contact and emotional support, online exams which included lots of questions with limited response time to control the security of exams, etc. caused many students in the LMS group to experience higher anxiety levels (Russell, 2020). As a remedy, the students should be given enough time to cope with the new distant learning situation by providing help so they become more willing to learn. Teachers' emotional support can also help reduce the learners' anxiety to better proceed in the new learning situation. This is because the students are faced with learning input different from their own language and culture and delivered via a new environment.

Conclusion

The results of the present study showed when the learners used the LMS platform they experienced more anxiety than the times they used WhatsApp. This study provides several practical recommendations for reducing learners' language anxiety in an online learning setting.

In order to minimize the anxiety of online EFL learning, the teacher can form groups and then assign a leader who can inform the students about the instructional activities in the online class. The teacher can also reduce the instruction time and give adequate time for practice. In addition, the teacher can foster cooperative learning in online classes. The cooperation among the students might reduce their anxiety level compared to the teaching contexts where the individual learner is responsible for his/her learning. Being aware of the particular learning environment, the teacher should develop more empathy with the students through providing positive comments and indirect feedback on the students' errors.

Furthermore, the teacher can also establish consistent rapport with the learners' parents, particularly those who are anxious. To alleviate the anxiety of making errors, the teacher can increase the number of informal tests and self-assessment assignments. Exams can be potential sources of anxiety for the students. Online exams can further add to the anxiety of the students. To lower the anxiety caused by the exams, the teacher can decrease the weight of end-of-term exams and instead increase the number of during-the-course exams. Such distribution of exams would reduce the anxiety of the students caused by the one-shot final exams in the online mode which are affected by many factors which are out of the control (e.g., low internet speed, blackouts, etc.).

The teacher can also attempt to modify the views on errors (e.g., by telling them that errors are a regular part of learning, and demonstrate their progress). The teacher can also assure the students that making errors will help them improve. Moreover, the teacher can ask the students to keep a log to document their changing emotions when involved in online learning. This would help them manage their anxiety level. Due to the emergent nature of synchronous platforms such as LMS, the availability of sound technological provisions (e.g., strong internet connections, well-working microphones, webcams, etc.) would considerably reduce the anxiety level of the students in the online classes. In addition, teachers should devote some sessions at the beginning of the course to clarify how the routine course activities would go on in the online class. Teachers can have these sessions in the middle of the course to negotiate with the students any problems they might have faced during the course.

As language learning programs have experienced a sudden shift to online learning, more studies on the learners' states and feelings should be conducted. The focus of future research should be on the exploration of the particular anxiety domains of the learners in different online platforms. Furthermore, it is recommended to replicate this study with a similar group over extended time periods to track the changes in the psychological states of the learners. In addition, future studies can investigate the students' geographical residence, access to technology, peers' effect, learning style, feelings, attitudes, language proficiency level, etc. which can potentially affect and mediate the effects of the online learning platforms. These would enrich the existing literature on CALL in the EFL language learning contexts.

In sum, computer technology will be a key component in the twenty-first century educational contexts. Therefore, the language teaching profession should capitalize on its advantages and benefits by using the best teaching practices, which, in turn, should be informed by SLA theory whenever possible. As a serious requirement for the technologically-integrated teaching practices, learners' characteristics should be a consistent priority.

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Appendix

Interview Questions

1. How do you feel about your experience of learning English?
2. Please tell me what disturbs you the most in online learning English. Why?
4. What kind of situations cause stress or anxiety for you in the class?
5. What happens to you when you are in a stressful situation in the online English class?
6. What do you think are the reasons of this anxiety?
7. In which kind of situations you do not feel anxious or less anxious?
8. What do you think will reduce language anxiety for learners?