The relationship between EFL learners' satisfaction with online education and their anxiety level

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Abstract

The present study aimed to investigate the relationship between Iranian senior high school EFL learners' satisfaction with online education and their anxiety level during COVID-19 outbreak. To this end, 180 students from two senior high schools were asked to participate in this study. Based on the performance of the participants on the Quick Placement Test, the researcher recruited 100 students through availability sampling. To determine the anxiety level of the participants, the Foreign Language Classroom Anxiety Scale was employed. Moreover, the satisfaction questionnaire was used to check the learners' satisfaction with online education. The Pearson correlation was run to determine the correlation between different levels of anxiety and e-learners' satisfaction. The results indicated that there was a significant negative correlation between these variables. In other words, as the anxiety level of the participants increased, their satisfaction with online education decreased to a significant extent.

Keywords: Anxiety levels, EFL elementary learners, e-learners' satisfaction;

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1. Introduction

Today, teaching environments for language education can be classified as traditional classroom environment or distance learning environment (House and Kádár, 2023). Distance education removes barriers and gives language learners the chance to learn languages without the limitations of time and place. Distance education students have the opportunity to learn or develop a foreign language through distance education, as they can attend online courses from anywhere they want with computer or mobile devices (Stratton, 2022; Butler, 2023). Through virtual classrooms or online materials, students can participate in interactive activities, be exposed to real language, and interact with instructors and other students (Hillman, 2023). They can watch recorded lectures or movies if they miss a lecture or want to watch the lecture again to change the content. Teachers, on the other hand, can easily update the original items after they have been prepared. Students can follow their progress through virtual logs (Sato and Loewen, 2022).

In EFL settings, online education environment together with the widespread use and availability of computers and smart phones connected to the Internet have fundamentally transformed the pace of foreign language learning particularly on the part of the EFL learners (Vasylets et al., 2022). The developments and innovations in technology suggesting new and unique features in language learning field combining audio, visual, and animation effects have made online education a valuable and promising medium (Shyamlee and Phil, 2012). In fact, while reducing the cost and increasing the efficiency in time, online education has brought about many other advantages in terms of EFL learning and teaching including learner-centeredness, suitability for EFL learners' own pace of learning, increasing EFL learners' motivation, availability of diverse forms of sources to practice the language, and interaction with others through various online platforms (Mohammadi et al., 2011). Iranian EFL setting has not remained an exception, particularly the sudden global outbreak of COVID-19 in late 2019 has led to flourishing online teaching, requiring all learners including EFL learners to use national and international social platforms such as Sorush and WhatsApp application.

Meanwhile, some scholars of educational technology and online instruction argue that the implementation of online education might develop limitations, challenges, and dissatisfactions. Most significantly, lack of interaction between teachers and learners in online courses and failure to meet realistic needs of learners might be one substantial challenge of online education (Carnevale, 2004). Another major difficulty to implementing online education is that instructors should create and prepare proper materials for online instruction while this can potentially place a considerable demand on teachers (Reeves and Brown 2002). Moreover, according to Taylor (2003), providing timely and efficient feedback to learners would create concerns for teachers in online education. Furthermore, delays in providing feedback and responding to learners' questions would cause misunderstanding and frustration. The final restriction of online education as Brun (2013) puts it, which is that most teachers would not possess the necessary skills and expertise essential for implementing online education.

Considering the above-mentioned challenges, it seems to be necessary to determine how EFL learners with different learning traits would behave in this newly developed context. Among other learner variables, the one that specifically deals new and challenging situations is the anxiety level of EFL learners. As they shift from a face-to-face to an online learning situation, online students are probably to feel anxious about their ability to succeed in what could be an unknown learning environment (Aubrey, 2022). Foreign language anxiety (FLA) is one of the most significant affective factors in second or foreign language (L2) learning classroom settings. Not only it is intuitive to many people that anxiety negatively influences language learning, it is reasonable because anxiety has been found to interfere with many kinds of learning and has been one of the most greatly examined variables in all of psychology and learning (Piniel and Zólyomi 2022). According to Burn (2010), regardless of the potential of virtual courses in decreasing learners' anxiety, first-time users of a virtual environment may meet a "pain barrier" due to the "public and potentially intimidating nature of this virtual world" (p. 19). According to Lewis and Atzert (2000), Maurer and Simonson (1993),

anxiety experienced by language learners within the context of a virtual course can be related to the construct of computer anxiety, the underlying factors of which are fear of using computers as well as resistance to use them. Technical or computer anxiety may lead to learners' feeling anxious in a virtual world.

Anxiety as an affective variable is believed to affect foreign language learning. Foreign language anxiety is often studied and seen in a language class situation; however, as online education is a relatively new field, it has not been studied in this context. It has been explained that language learning is a deeply disturbing psychological proposition as it jeopardizes the individual's self-understanding and perspective. Many studies (e.g., Horwitz et al., 1986) have been conducted to find the relationship between anxiety and success in learning a second language, and most have found a negative relationship between anxiety and language learning. Relational research on the effect of anxiety on language learner performance has produced mixed results. On the one hand, the findings of Alpert and Haber (1960) and Chastain (1975) showed that anxiety can have a facilitating effect on students' performance. On the other hand, MacIntyre and Gardner (1989) and Saito et al., (1999) showed that there is a negative relationship between language anxiety and the overall performance of English learners.

Besides, although there are many reasons to regard anxiety as an influential variable, which may extremely influence EFL learners' satisfaction with online education, to the researcher's best knowledge, no attempt has been made to investigate the relationship between these two variables. On the whole, considering the importance of online education and the role of anxiety in the performance of language learners, there is a huge gap in the related literature that needs to be addressed.

With regard to the above-mentioned materials concerning online education and FLA, the present study can shed light into this area. In fact, as online education is a relatively newly developed medium of instruction, it is of great importance to examine different variables that might affect the process of language learning in this context. The present study particularly focuses on two variables that, to the researcher's best knowledge, have not been investigated so far.

Based on the objective of the study, the following research question was formulated.

Is there any significant relationship between Iranian senior high school EFL learners' satisfaction with online education and their anxiety level?

2. Literature Review

Theoretical and practical considerations related to online education and anxiety are discussed below.

2.1. Online education

The conception of online learning is not a new thing; it has been in use for decades. According to Wang (2003), the development of online learning technology is the most important evolvement of information and communication technologies. E-learning or online learning emerged of the distance education tradition. Distance education comprises "different forms of study at all levels which are not under the continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, however, benefit from the planning, guidance and instruction of an instructional organization" (Holmberg, 1986, p. 26). According to Vilanova (2016), online learning focuses on setting and keeping people's networks in personal environments using media and technological devices and through a supported and dialogic conversation.

Distance education has developed on the marginal of universities and is often seen more as an addition rather than a central component to an institution's academic mission. While its position in the university has changed and its importance in academia is increasing (Feenberg, 1999), the roots of e- learning can still be seen in the current discussions about how to validate courses delivered outside the traditional classroom. E-learning is officially defined as "education through a connection

to a computer system at a locus distant from the learner's personal computer" (Larreamendy-Joerns & Leinhardt, 2006, p. 568).

2.1.1 Advantages of e-learning

As Yang & Chen (2007) noted, automatic speech recognition technology offers speaking practice opportunities for students who rarely start speaking to native English speakers and for those who are shy about improving their speaking skills. The biggest advantage of online learning technology (Sun et al., 2008) is the ease of interaction from instructor to learner or learner to learner.

One advantage of e-learning is the use of automatic speech recognition systems that allow students to engage in speech interactions with a computer (Chiu et al., 2007). According to Chiu et al. (2007), Candle Talk, a web-based speaking environment, was developed to enable students to communicate interactively with their computers. This software allows learners of English as a foreign language to access open-spoken training programs and thereby improve their oral skills.

In addition, the application of automatic speech recognition software as used by college freshmen can facilitate the teaching of verbal communication. Significantly, most of the students have welcomed instructional methods based on speech recognition software.

Garrison (2011) and Yang and Chen (2007) asserted that another advantage of online learning is that it is useful as an instrument for creating successful learning environments to motivate students and create meaningful and valuable learning activities and results. For example, Garrison (2011) has argued that the text-based online learning communication, created by e-mail messages or discussion threads, has unique and important characteristics that can facilitate critical discourse and reflection. Accordingly, Farzi (2016) observed that computers can be programmed to offer corrective instruction to identify any mistakes in writing. Perhaps this helps learners correct their mistakes and improves their writing.

Besides, online learning provides unprecedented chances when improving reading skills, due to the unrestricted accessibility of course materials (Brandl, 2002). Online information enables students to conquer the confines of textbook based learning, by upgrading access to knowledge at any time and from anywhere. Opportunities for listening to authentic language are also provided through online. In fact, Romeo (2008) studied the importance of listening exercises to know relative clauses and audio prompts accessible through online applications. He reports on evidence that proposes when more syntactically complex clauses are used, students change their way of learning and understanding.

The online learning interactions identified above do not only support the improvement of learners' English language skills, but also promote learners' interest and motivation in language learning in general. However, the advantages of an online learning system cannot be increased if students and teachers do not use it.

2.2. Anxiety

The concept of anxiety plays a significant role in L2 learning. According to Spielberger (1983), anxiety is the subjective feeling of tension, apprehension, nervousness, and worry related to an arousal of the automatic nervous system. Anxiety can usually be divided into two types: one is called trait anxiety, which is a more long-lasting predilection or to be anxious about everything (Scovel, 1978) and the other one is called state anxiety, which refers to the experience when performing a particular task or activity in a particular context such as giving a lecture before a group (Brown, 2001). Trait anxiety has not proved to be helpful in predicting L2 achievement due to its global and ambiguous nature. Therefore, according Gardener & MacIntyre (1993), the current research on language anxiety mainly focuses on the situational nature of state anxiety. With the shifting of research focus from teachers to learners in L2 learning, affective factors, such as attitudes and motivation, were thought to account a lot for language learning accomplishments. Meanwhile,

anxiety, as a significant affective factor, has been viewed very crucial, and since the 1970s lots of research has been conducted to investigate its role in L2 learning.

2.2.1. Language anxiety

Research findings by Horwitz, et al., (1986) shed some light on the nature of language anxiety. Based on the findings of their study, three main causes of language anxiety have been addressed: (a) communication apprehension, which arises from language learners' inability to air their thoughts and feelings, (b) test anxiety that is related to academic evaluation, and (c) fear of negative evaluation, which grows out of a language learner's need to make a positive social impression on other individuals.

A deeper understanding can be gained from the distinction brought into attention by Alpert and Haber (1960), that is, debilitative versus facilitative ramification of anxiety on learning. Most research, to date, shows a negative relationship between anxiety and language learning outcomes. In other words, anxiety slows down the process of language learning. Krashen (1985) proposed the affective filter hypothesis, in which he argues that high anxiety will prevent input that language learners receive in the classroom from reaching the language acquisition device. Furthermore, Horwitz (1986) believes that language anxiety can cause L2 learners to postpone language study indefinitely or to change their field of study. In another study, MacIntyre and Gardner (1994) indicated that language learners with higher anxiety level find it more difficult to express their own opinions and tend to undervalue their own abilities. Nevertheless, other studies indicate neutral or positive relationships between anxiety and L2 achievement. For example, Bailey's (1983) study showed that facilitative anxiety played a key role in L2 success, and closely related to competitiveness. Backman's (1976) study also indicated that there was no relationship between language anxiety and achievement. Therefore, referring to these studies, it can be claimed that the relationship between anxiety and L2 success is probably not a simple linear one.

3. Methodology

The participants of the study, instruments, and data collection procedures are discussed below.

3.1. Participants

One hundred and eighty elementary EFL learners who were available for this study were initially selected. Then, based on their performance on the QPT, 150 EFL learners whose scores fell between 16 and 23 were selected as elementary participants. On the whole, the sample included 100 female senior high school students at grades 10th, 11th, and 12th taking part in this study that aimed at evaluating and assessing the relationship between their anxiety level and their satisfaction with online education. The students were all first speakers of Farsi and were all studying English as a foreign language. The age of the participants was 16–18 years old.

3.2. Instruments

Three instruments were used in this study: (a) QPT, a flexible test of English language proficiency developed by Oxford University Press (2007), which gives teachers a reliable and time-saving method of finding a student's level of ability in English, and (b) Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al.(1986). This scale has been widely used by researchers to examine the anxiety of L2 learners and investigates the effect of anxiety on learning in different settings. The Persian version of the questionnaire adopted from Tayyebi and Shaarifzaadeh (2020) was used in this study, and c) the questionnaire developed by Stefanovic et al. (2011) that was adopted by the researcher as a major research method to elicit participants' satisfaction.

3.3. Data collection procedures

FLCAS consists of 33 questions with answer options ranging from 1 to 5 for each item investigating the degree of anxiety experienced by students in foreign language classes. Out of 33 questions, eight are about communication anxiety (1, 9, 14, 18, 24, 27, 29, 32) and nine are about fear of negative

evaluation (3, 7, 13, 15, 20, 23)., 25, 31)., 33) and five items (2, 8, 10, 19, 21) to test anxiety. Finally, the remaining 11 items were placed in a category called the anxiety of English lessons. The 5-point Likert scale ranges from "Strongly Agree" (SA)=5, "Agree" (A)=4, "Neither Disagree nor Disagree" (NA)=3, and "Disagree" (D)=2 to "Strongly Disagree" (SD)=1. If the scores given to each answer of each statement are added, the scores of the students from the anxiety scale vary between 33 and 165. The higher the total score, the more anxious the participant is participants were asked to answer the questions by stating their degree of agreement or disagreement.

Online satisfaction survey developed by Stefanovic et al. (2011) consists of 39 satisfaction items. All 39 items in the questionnaire were classified in four dimensions (independent variables), namely, the instructors dimension, the lesson dimension, the technology dimension, and the environment dimension. E-student satisfaction was considered as a dependent variable. The first dimension, the trainer dimension, includes five statements (items 1–5). These five statements are based on the timeliness of the instructor response and the instructor's attitude toward e-learning. The second dimension, the course dimension, includes eleven statements (items 6–16) based on e-learning course flexibility and e-learning course quality. The third dimension, the technology dimension, consists of eight statements (items 17–24) based on technology quality and internet quality. The fourth dimension, the environmental dimension, consists of six statements (items 25–30) based on diversity in assessment and class discussion. E-student satisfaction is considered as the dependent variable and consists of nine statements (items 31–39). In fact, this survey was chosen to measure the range and frequency of use by English learners. The inventory can be viewed as a quantitative questionnaire, because frequency of the use was measured on a seven-point Likert scale, and all participants were asked to tick only one option. It varies between strongly disagree=1, disagree=2, somewhat disagree=3, undecided=4, somewhat agree=5, agree=6, and strongly agree=7. Scores range from 80 to 240. The questionnaires were distributed online through WhatsApp groups due to the closure of schools due to the COVID-19 outbreak, and the participants were asked to respond to the statements given. They were asked to send the questionnaires back privately through WhatsApp, not within the group. In the process of preparing scientific research, it is important to comply with ethical rules and produce information that has validity and reliability (Ugurlu, 2020). In this study, ethical rules were followed in the creation of data collection tools and in the process of recording the data.

4. Results and findings

The students received two questionnaires. The total scores of all items in the two questionnaires were calculated. The anxiety level of the students in accordance with the criteria given in the FLCAS questionnaire as reported in the instrument section was determined. Moreover, the descriptive statistics for each level of anxiety were calculated.

4.1. Descriptive statistics on different anxiety level of the participants

Table 1 below shows the descriptive statistics for the different anxiety levels of the participants. As given below, the average score of students with low anxiety level is 71.00 and the standard deviation is 3.74. The next level is moderate anxiety, with a mean score of 97.51 and a standard deviation of 10.01. In addition, the average score of the participants from high anxiety level is 127.75, and the standard deviation is 6.45. The minimum and maximum scores of the distributions for each anxiety level are also given in this Table.

Table 2 below presents the descriptive statistics on the second variable of the study, that is, the e-learner satisfaction based on the participants performance on the questionnaire developed by Stefanovic et al. (2011). As given in this table, the e-learner satisfaction has a mean score of 3.10 and a standard deviation of 1.46. Based on the seven-point Likert scale used in this study, one stands for strongly dissatisfied, two stands for dissatisfied, three means more or less dissatisfied, four shows undecided, five indicates more or less satisfied, six means satisfied, and seven stands for strongly

satisfied. Therefore, it can be concluded that the mean score of 3.10 indicates that the participants of this study were more or less dissatisfied with online education.

Table 1.

Table 1. Descriptive statistics for different anxiety level of participants

Level of Anxiety	N	Min	Max	Std. Deviation	Mean
Low Anxiety	9	64	75	3.74	71.00
Moderate Anxiety	83	76	118	10.01	97.51
High Anxiety	8	120	138	6.45	127.75

4.2. Descriptive statistics for e-learner satisfaction

Although the participants were more or less satisfied with the instructor's response timeliness and her attitudes toward e-learning (see Table 3), their opinion on the course dimension (e-learning course flexibility and quality), technology dimension (technology quality and internet quality), as well as Environmental dimension (diversity in assessment and interaction in e-learning environment) decreased their satisfaction to a great extent.

Table 2.

Table 2. Descriptive statistics of e-learner satisfaction

N	Min	Max	Std. Deviation	Mean
100	1.00	7.00	1.46	3.10

4.3. Descriptive statistics of different determining categories of satisfaction

Table 3 shows the descriptive statistics of different determining categories of satisfaction with online education. Based on the findings of the study, the participants were more or less satisfied with instructor dimension (M = 5.4, SD = 0.85), including instructor response timeliness and instructor attitudes toward e-learning, which means that the participants have received comments on assignments or examinations for this course relatively on time by instructor. Participants were almost undecided about course dimension (M = 3.83, SD = 0.93), the second dimension, comprising e-learning course flexibility and e-learning course quality In other words, participants were undecided about flexibility of the course for example whether the advantages of taking the course through the internet outweighed any disadvantages, or taking the course through the internet allowed them to arrange their work for the class more effectively. Participants were also undecided about the quality of the course comparing to their other courses. The participants were also undecided about the third dimension of the study, namely, the technology dimension (technology and the Internet quality), with a mean score of 3.95 and standard deviation of 1.03. It means that they were hesitant if the information technologies used in online learning had enough useful functions and if they had good flexibility and were easy to obtain or not. They were also undecided about the speed of the Internet, its communication quality and the fee of connection to the Internet. Finally, the findings of the study indicated that the participants were also undecided about the last dimension, that is, the environmental dimension (M = 4.26, SD = 0. 97), which includes diversity in assessment and interaction in e-learning environment. It means that they were neither satisfied nor dissatisfied with offering a variety of ways of assessing their learning (quizzes, written work, oral presentation, etc.) by e-learning course.

Table 3:

Table 3. Different determining categories of satisfaction

Dimensions	N	Min	Max	Std. Deviation	Mean
Instructors dimension	100	3.00	6.60	0.85	5.4
Course dimension	100	1.54	5.72	0.93	3.83
Technology dimension	100	1.87	6.37	1.03	3.95
Environmental dimension	100	1.00	6.50	0.97	4.26

And finally, to determine the relationship between anxiety level of the students and their satisfaction with online education, the data were first fed into SPSS to check the normality distribution of the scores. It was shown that the scores were normally distributed. Therefore, Pearson Product Moment Correlation Coefficient was run. Based on the results reported in Table 4, there was a weak negative correlation between anxiety level of the students and their satisfaction with online education which was statistically significant ($r = -0.204$, $p = 0.042$).

Table 4:

Table 4. Pearson's correlation

		Anxiety	Satisfaction
Anxiety	Pearson Correlation	1	-0.204[*]
	Sig. (2-tailed)		0.042
	N	100	100
E-learner satisfaction	Pearson Correlation	-0.204[*]	1
	Sig. (2-tailed)	0.042	.
	N	100	100

*. Correlation is significant at the 0.05 level (2-ailed).

The relationship between the variables is estimated as −0.204, which further reinforces the relatively weak relationship between anxiety level of the students and their satisfaction with online education. The negative correlation means that as one of the variables increases, the other tends to decrease and vice versa. As a result, as the anxiety level of the students increases, their satisfaction with online education decreases and *vice versa*.

Furthermore, the researcher used coefficient of determination to determine what percent of the variation in satisfaction with online education could be explained by anxiety level. The determination coefficient score of 0.41, ($r2 = 0.41$) (the square of the correlation coefficient), shows that only 41% of the variation in E-learner satisfaction is influenced by anxiety and the remaining 59% of the variation in e-learner satisfaction might be affected by the other factors.

5. Discussion

This study aimed to examine the relationship between satisfaction with online education and anxiety levels of Iranian high school students learning English. Normality tests showed that the scores were normally distributed. Correlation analysis showed that there was a significant and weak negative correlation (r = −0.204) between foreign language learning anxiety and satisfaction with online education. This is consistent with the previous studies (Awan et al., 2010; Bozdogan & Demirdas, 2013; Horwitz, 1986). Similarly, Horwitz (1986) found a significant negative relationship between foreign language anxiety and students' English achievement. In the same context, Wilson (2006), Hewitt and Stephenson (2011) investigated the relationship between students' oral performance and foreign language anxiety. According to the results obtained, a significant, moderately inverse relationship was found between the success of speaking skills and foreign language anxiety.

It is clear that anxiety negatively affects the process of learning a second or foreign language. This suggests that the classroom environment should be friendly and students should be told that they are not the only ones who encounter anxiety while learning a foreign language. Teachers and curriculum designers should come up with specific instructional activities to help students reduce their anxiety. In addition, teachers can provide guidance from the target language to the native language of the students when necessary. This can help students overcome the anxiety, they may encounter during the education process and can encourage them to perform better in their English lessons.

6. Conclusions

This study dealt precisely with EFL learners' satisfaction with online education and their anxiety level to see if there is any significant relationship between the two variables. Since online education is an alternative to traditional face-to-face education in the time of ongoing COVID-19 pandemic and lock down of educational centers and schools, many institutions had to implement online learning to meet students' needs, and since anxiety is one type of emotional problem that could highly impact the performance of learners when learning a foreign language, it is normal to feel anxious in particular situations. As stated by Horwitz (1996), an anxious foreign language learner is a less effective foreign language learner.

According to the findings of this study, learners' anxiety hampers the e-learner' satisfaction. As expected, the analyses of the variables related to foreign language anxiety and e-Learners' satisfaction revealed a significant negative correlation between language anxiety and e-learners' satisfaction. It means increasing anxiety in learning English is resulted in decreasing of the students' satisfaction with online education. The results show clearly that anxiety has negative impact on students' satisfaction with online education. Accordingly, the finding is in line with some previous studies Horwitz (1986), Amiri and Ghoonsoly (2015), Halder (2018) which reported the negative correlation between anxiety and achievement in language learning.

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