

The Impact of Web-Based Language Teaching on Advanced EFL Learners' Self-Regulation and Self-Actualization

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Abstract: This quantitative research has been prepared to study the effect of web-based language teaching on advanced EFL learners' self-regulation and self-actualization. In doing so, 40 advanced students of both genders were chosen based on the convenience sampling method. They were approximately between eighteen to twenty-eight years of age at a private language institute in Kerman, Iran. Different instructional and testing materials, including the Oxford Placement Test, Short Index of Self Actualization Inventory, and Academic Self-Regulation Questionnaire were applied to gather the required data. Results revealed a significant improvement in self-regulation and self-actualization of the students in the case group. It means E-learning had an impact on advanced EFL learners' self-regulation and self-actualization. The results of this work could be beneficial for educators, trainers, instructors, and material developers to take into account the efficacy of such instructional materials and devote greater resources to developing and implementing them.

Keywords: EFL context, self-regulation, self-actualization, web-based language teaching

INTRODUCTION

The increasing importance of technology's role in language classrooms cannot be overlooked in recent years, as teachers and students frequently use language instructions with the use of technology (Sun & Yang, 2015). The internet has facilitated connections, shared ideas, and globally contributed to world knowledge. The fast advancement of information technology has greatly profited language instruction in a novel and substantial way (Luo, 2013). The phrase "web-based language learning/teaching" (WBLL/WBLT) is becoming increasingly common in language education. Studies focusing on using web-based resources in language classrooms have become more prevalent. Currently, web-based technology permits language teachers to expand their instruction outside the limits of their language classroom (Lai & Gu,

2011). According to Sockett (2014), digital technology offers several helpful resources for learning English. However, according to previous studies the usage of digital technology in formal learning situations may be demotivating (Evans & Tragant, 2020). Some studies have concentrated on enlarging the discrepancy in behavior between English language learners in traditional classrooms and online classrooms (Henry, 2013). English classes may seem boring, packed with basic knowledge-building exercises, and focused on exam-based credentials compared to students' independent internet activities.

According to Mostofi (2018), the absence of both the emotive and mental elements of foreign language learning may lead to inadequate ways of language instruction and difficulty for language learners. In terms of the intuitive component, success for language learners is affected by various elements, including motivation and attitudes (Oroujlou & Vahedi, 2011; Shirani & Bidabadi, 2012). Moreover, more psychological factors, i.e., self-regulation and self-actualization, have been studied concerning language learners. In psychology, self-regulation is the ability to comprehend and control reactions and manners to feelings and things happening. It is the ability to regulate responses to strong emotions such as excitement, frustration, anger, and embarrassment. Also, it can play a remarkable role in relationships, well-being, and overall success in individuals' lives. People who can control their feelings and behavior are more successful in managing their stress, dealing with conflict, and achieving their aims. Self-actualization, often known as self-awareness or self-cultivation, is the full manifestation of a person's capacity as reflected in consciousness, which includes a person's abilities and appreciation for life completely improved (Maslow, 1962). In Maslow's view, people's most basic need is to become themselves fully. It is the moment when people fully understand their abilities and may live their lives according to their deepest desires. The benefits of self-actualization are numerous, including mental tranquility, joy, fulfillment, etc.

According to Hartley and Bendixen (2001), the literature on educational technology research has paid insufficient attention to the characteristics of learners. There are some exceptions (e.g., Jacobson & Spiro, 1995; Hannafin & Land, 1997; Anderson, 2000), but it would take much more effort to concentrate on developing self-regulatory abilities and self-actualization in online language study. Students' capability to manage the data they receive on the internet may be influenced by their repertoire of techniques for assessing knowledge acquiring and motivation to use such methods. Highly self-regulated learners are more suited to gain from this new setting. Additionally, to self-regulatory and self-actualization skills, other factors such as incitement, physical challenges, self-consciousness, learning ability, and disabilities need careful attention. Web-based teaching is essential in increasing students' self-regulation and actualization, involving them in authentic situations and providing them with intensely dynamic language experiences (Reeve, 2006). The studies that considered self-regulation and self-actualization strategy applied in online classes (Eastmond, 1995; Butler & Loomis, 2000; Zariski & Styles, 2000) are restricted. The objective of the present investigation is to close the gaps described above. It first seeks to assess how web-based language instruction affects advanced EFL students' ability to self-regulate. Second, it attempts to investigate if learners' self-actualization is affected by online language teaching.

Theoretically, online language instruction should provide students with a conducive setting for self-directed learning because this form of instruction is authentic, functional, interactive, and constructive. In other words, the exercise of learners' autonomy should be promoted in web-based language teaching. However, not all learners can achieve the requirements of self-directed learning in a virtual classroom, which could lead to significant attrition rates for learning (Carr, 2000; Chang, 2005; Kubala, 1998). In recent years, this innovative method of instruction has become increasingly common in language education. It has been interesting in numerous studies about psychological issues such as motivation and critical thinking. Moreover, few studies have investigated the effects of WBLT on two

significant self-regulation constructs and self-actualization in education, which enhance students' academic performance in many fundamental ways. In other words, nothing is known about whether or how online courses could impact learners' self-regulation and actualization. Therefore, considering the limited research on this critical issue, the current study's main objective is to empirically investigate the effect of Web-based language teaching on Advanced EFL learners' self-regulation and self-actualization. This investigation employs an experimental approach to elucidate if web-based language teaching influences advanced EFL learners' self-regulation and self-actualization. In other words, an effort will be made to clarify (1) the effect of WBLT on advanced EFL learners' self-regulation skills and (2) the influence of WBLT on advanced EFL learners' self-actualization. The following research questions were formulated in this study:

RQ1. Does the employment of web-based language teaching make a statistically significant difference in advanced EFL learners' self-regulation?

RQ2. Does the use of web-based language teaching make a statistically significant difference in advanced EFL learners' self-actualization?

H0-1. The use of web-based language teaching doesn't make a statistically significant difference in advanced EFL learners' self-regulation.

H0-2. The use of web-based language teaching doesn't make a statistically significant difference in advanced EFL learners' self-actualization.

Several studies have investigated how various teaching methods affect psychological elements such as learner beliefs, anxiety, and motivation. However, few studies examined how self-regulation and self-actualization can be influenced by WBLT in Iran. Therefore, the study's importance stems from the fact that little is known about how web-based language instruction affects advanced EFL learners' self-regulation and actualization. Accordingly, this study will fill a gap in academic knowledge by investigating the association between web-based language teaching and self-regulation and self-actualization. Furthermore, the findings of this attempt can inform policymakers of the issue. The results of this investigation are helpful in language institutes and schools, researchers, educators, and language teachers.

LITERATURE REVIEW

With the development of the internet, people from all over the world can now stay in touch while exchanging ideas and advancing knowledge. Internet usage's significance in modern language learning and teaching is on the rise. A considerable amount of technology-assisted language education is typical among teachers and students. In other words, the fast growth of digital technology and the internet, the shutdown of physical classes during the COVID-19 pandemic, and a distinct set of advantages of online education such as flexibility, cost-effectiveness, Web-Based Language Learning, and teaching became the new norm. Therefore, in recent years, a common instrument in language education is web-based language learning (WBLL). This issue has also been addressed and investigated in some studies. With web-based language learning, students can more freely keep track of their progress without paying attention to other students or teachers, their schedules, or their physical location.

Additionally, the students can choose whether to engage in the activities (Khany & Khosravian 2014). Additionally, since professors don't seem to be able to wait to be online, students in online classes can depend on themselves. This improves the individual learning capacities of second and foreign-language learners (Khany & Khosravian 2014). Similarly, Shi et al. (2006) claimed that one of the primary advantages of WBLL is the students'

comfort. This type of ease may prove beneficial for adult EFL learners who are frequently preoccupied with their careers. Due to the physical limits of language classrooms, instructors can now expand their teaching practices through the internet (Lai & Gu, 2011). For example, Ghoneim and Elghotmy (2016) believe that in blended learning methods, English language learners can develop their language abilities without time or space restrictions. Furthermore, students have more opportunities to learn and utilize the target language when they collaborate with their classmates (Ghoneim & Elghotmy, 2016).

Congruent with Vygotsky's sociocultural theory (1978) and Long's interaction hypothesis (1996), WBLL allows students to connect with one another and gradually develop their expertise, which aids in language acquisition (Lin, Shie & Holmes, 2017). Simply put, the use of web-based tools increases the potential for fruitful interactions between language students and instructors. Although Web-Based Language Learning (WBLL) has grown in popularity in language education, arguments favoring its use have primarily relied on theory rather than empirical evidence (Luo, 2013). Therefore, further methodological studies are needed on different aspects of WBLL. Zhou and Zhu (2021) investigated to what extent students can focus and control their behavior when they are separated from their peers and teachers. Their study gathered quantitative and qualitative data from a sample of 580 Chinese university students in various majors who were enrolled in online English courses in Emergency Remote Teaching (ERT) mode during COVID-19 to address this issue. With an emphasis on the Technology Acceptance Model, this research assessed distinct psychological and social elements that influence learners' acceptance of e-learning and online self-regulation (TAM). Goal planning, task strategies, and self-evaluation are three self-regulated strategy sub-processes that learners use. The suggested research framework and assumptions were tested using structural equation modeling (SEM)-partial least squares (PLS). The quantitative findings showed that social presence and flow, two common psychological characteristics, are powerful predictors that influence Chinese learners' adoption of e-learning. Media richness, a contextual component, was also shown to have an impact. Quantitative research revealed that the three stages of self-dependability learning strategies are influenced mainly by learners' behavioral desire to use e-learning. Additionally, a thematic evaluation of the qualitative data uncovered that learners' impressions of the online learning experience were quite conflicted and mixed. These findings significantly impact the creation and delivery of efficient virtual English classes.

An et al. (2021) studied technology-assisted self-regulated English language learning. They studied the technology-based self-regulated learning (SRL) strategies used by Chinese university students to determine whether these strategies mediated the relationships between learning results and English language self-efficacy and satisfaction. Three self-report questionnaires and an English language competence exam were used to gather information from 525 undergraduate students in mainland China. While students reported using SRL tactics on average at a moderate level, they utilized technology-based vocabulary learning strategies at a high level. The students' English learning results were found to be positively correlated with the utilization of technology-based SRL techniques. Both self-efficacy in English and pleasure in the language were linked to technology-based SRL techniques. Self-efficacy in the English language had a minor mediating effect on the relationship between English learning satisfaction and SRL approaches. In contrast, the connection between English learning success and results was completely controlled by SRL approaches. The study's pedagogical reports indicate that to maximize the usage of technology by learners for language acquisition, training, and instruction targeted at promoting current educational technology among them should focus on growing their strategic knowledge of motivational control.

Iranian Intermediate EFL Learners' L2 Motivation and Attitude in a Computer-Assisted Language Learning Environment were the subject of a study by Nasri, Shafiee, and Sepehri (2021). The study aimed to examine the motivation for learning the English language and the CALL environment attitude of Iranian EFL students. One hundred twenty intermediate EFL students from two private English language schools in Isfahan, Iran, participated in this study. Two groups with an equal number—one experimental group (EG) and one control group—were created (CG). Then, they were given a motivation questionnaire to assess the participants' motivation at the start of the course.

The EG students received treatment using CALL-based instruction, while the CG students received conventional education. Questionnaires on motivation and attitude were given out after the treatment. The questionnaire results showed that the CALL-based instruction increased the participants' motivation. Additionally, it was found that the learners in the EG had favorable views toward adopting CALL-based education, as assessed by a 20-item A-CALL attitude assessment. Several inferences are drawn from the findings, and several implications are put forth. In a study published in 2020, Lamb and Arisandy investigated how online English usage affected students' motivation to learn. This study presents the findings of a research effort that looked at how urban adolescents in Indonesia used the language online, how that linked to their overall motivation to learn the language, and, more specifically, how that related to their opinions toward English instruction in the classroom. A 56-item survey of students at a prestigious university ($n = 308$) and subsequent interviews with four individuals who displayed various activity and motivational profiles made up the mixed-method design. The levels and types of online activities were generally consistent with those observed in other contexts, with students choosing self-education and amusement over socially focused action. This was shown to be generally connected with a favorable attitude toward learning in the classroom, but cluster analysis showed that some people displayed a different pattern of response, which was subsequently investigated in an interview. The study addresses how educators might support teachers in incorporating students' online informal language learning into their classrooms while working under strict curriculum constraints and at lower proficiency levels.

The impact of web-integrated instruction and feedback on Iranian EFL learners' capacity for self-regulated learning was examined by Kheiri, Soleimani, Jafarigohar, and Rostami AbouSaeedi in 2019. To evaluate the effects of paper-based feedback versus web-assisted feedback on the ability for self-regulated learning, the study first sought to understand how web-integrated instruction in writing classes affects this capacity. A quasi-experimental approach was used in both cases to achieve this goal. In keeping with the first goal, a test group was created to administer the web-integrated instruction therapy, while a control group was created to receive non-web-integrated training. An average of 15 Iranian EFL students participated in each of the groups mentioned above, and they were pre- and post-tested using the Academic Self-Regulated Learning Scale (ASRLS) questionnaire. In the following part of the study, two experimental groups for the forms of feedback that are paper-based and web-assisted, as well as a control group that receives no feedback, were randomly considered. The Mann-Whitney U test findings showed a statistically significant difference between the groups receiving training that integrated the Web and those who did not use their ability to self-regulate when writing tasks. In developing their self-regulatory methods, the experimental group participants who received instruction using web-integrated technology did better than those in the non-web-integrated group. Furthermore, using the Wilcoxon Signed-Rank Test to compare the self-regulatory abilities of the groups that received paper-based feedback, web-assisted feedback, and no feedback revealed that there was no statistically significant difference between them, and regardless of the type of feedback the groups received, no group did better than another in creating their self-regulatory strategies.

Consequently, it is possible to conclude that web-integrated writing education may considerably impact students' ability to self-regulate when composing tasks in contrast to other types of feedback.

Hajebi, Taheri, Fahandezh, and Salari (2018) examined how web-based language instruction affected the vocabulary recall of pre-intermediate EFL learners. The study aimed to investigate the impact of web-based language instruction on the subjects' vocabulary growth as well as the attitudes of the students toward the employment of the web-based method in language classrooms. A revised version of the Michigan test (version 1997) was administered to the students to guarantee their homogeneity, after which they were split into two groups: an experimental group ($n_1=33$) that used free vocabulary learning websites provided by IELTS English language learning sites daily for eight weeks, and a control group ($n_2=33$) that received regular classroom instruction each session. The conclusion is that web-based training in language learning classes enhances learners' perception. Additionally, it showed a noteworthy difference in the two groups' language knowledge (Experimental & Control). WBL instruction improved the vocabulary of EFL students. The results of this study could have some effects on how languages are taught and learned. These results can help language learning curriculum designers present assignments that improve students' language proficiency and increase their enthusiasm to use online resources for independent language study.

In order to determine whether online learning is suitable for all English language students, Kuamaa and Intharaksa (2016) sought to examine the impact of online language learning strategies (OLLS) on the learning of successful and unsuccessful students. They also looked at the relationship between OLLS use and affection in online learning. Three hundred forty-six university students taking a required online English course were participants. The participants were split into two groups based on their final grade: successful online language students (SLs, $n=262$) and failed online language students (ULs, $n=84$). Participants evaluated their use of three online learning management systems (OLLS)—cognitive, metacognitive, and resource management and their feelings of attachment to the medium. The major tools were an OLLS questionnaire and a stimulated recollection with an in-depth interview. The findings showed that OLLS were used by SLs more frequently than ULs.

Additionally, a significant difference between the mean SLs and ULs values for metacognitive techniques ($t=2.66$) was discovered at the level of 0.01 ($p<01$). The usage of resource management strategies by SLs and ULs did not differ significantly from one another. There was a considerable perceived gap concerning attachment in online learning. Online English learning outcomes were significantly correlated with metacognitive learning techniques and affection. The findings imply that poor English proficiency students lacked self-directed learning experiences and online learning skills, suggesting they may not be prepared for online language study.

Zarei and Hashemipour conducted a study to determine the impact of web-based instruction and computer-assisted language learning (CALL) on EFL learners' general and academic self-efficacy (2015). To achieve this, 110 intermediate-level Iranian EFL students, both male, and female, were randomly allocated to one of two treatment scenarios (experimental & comparison). The comparison group received traditional instruction, while the experimental group received CALL/Web-based instruction. Before and following the treatments, general and academic self-efficacy questionnaires were given to the participants in both groups. The Michigan Test of English Language Proficiency results was also used to determine the participants' proficiency level (MTELP). The collected data were examined using the ANCOVA method. Results showed that learners' general and academic self-efficacy was significantly impacted by CALL/web-based instruction. Compared to the comparison group members, the experimental group participants demonstrated a significant

increase in both their general and academic self-efficacy. This study's results may affect L2 students, teachers, and material creators.

Mohammadi, Ghorbani, and Hamidi (2011) examined the impact of e-learning in general and its subcategories, including the internet, Web-based English learning, and computer-assisted language learning (CALL), on language acquisition. Before the World Wide Web's (WWW) increasing popularity, people used emails for language learning and teaching (LL/LT). Computer-based educational activities are used in network-based language learning (NBLL). The real benefit of e-learning is that it raises students' motivation, engagement, and attendance—all of which are necessary for learning. English learning (EL) improved with the introduction of the Web and the internet since it had its language and logic and was not confined to a single culture. In reality, learning English online, in a virtual setting, poses problems to conventional learning methods. By using the internet, people can become more independent of books, instructors, and classrooms, which improves their speech communication skills. Other forms of e-learning include using mass media like books, manuscripts, and the internet (including weblogs, messages, podcasts, and video sharing). Nevertheless, using mainstream media and the internet might be difficult and time-consuming. They offer innovative and valuable ideas to educators and students.

According to Whipp and Chiarelli's (2004) research on the relationship between successful students in web-based courses and their self-regulatory abilities, these students utilized many conventional SRL strategies in addition to adapting planning, organization, environmental structuring, help-seeking, monitoring, and self-reflection strategies specifically to the Web-based learning environment. The data also revealed that significant motivating factors, such as self-efficacy, goal orientation, interest, and attributions, that affect SRL strategies were significantly influenced by students' successes in controlling the technical and social aspects of the course environment. Instructor assistance, peer support, and course design were significant contextual factors that affected the usage of SRL strategies. Niemi, Nevgi, and Virtanen (2003) studied students' ability to self-regulate in online learning environments. For use in virtual universities and other higher education settings, the IQ FORM project has developed the interactive web-based tool "The IQ Learn." The motivational components of forethought, cognitive strategies, and learning skills from Paul Pintrich have been incorporated into the project's design of interactive Web-based assessments, tutoring sets, and a learning diary. Data were gathered from five universities to assess the self-regulation abilities of various student groups. The statistics showed that there are significant differences in the learners' ability to self-regulate. Aspects of interactive self-evaluation assessments and tutoring sets were also validated using the data. Virtual teaching proved to be beneficial for pupils during the "IQ Learn" pilot project. The findings show that students who struggle with learning, lack consistent learning strategies and skills, or are just beginning their university studies will benefit most from the IQ Learn tool. The IQ Learn tool best assists students in learning when the teacher-tutor assigns specific instructions on how to utilize the tool or leads the students in using the device for self-reflection and self-evaluation. Teachers must learn how to incorporate self-regulation into Web-based courses to use the new resources available on the internet to help students learn.

Web-based instruction can improve students' self-control and actualization, place them in real-world situations, and give them highly dynamic language experiences (Reeve, 2006). The few research (Eastmond, 1995; Butler & Loomis, 2000; Zariski & Styles, 2000) that do address self-regulation and self-actualization technique utilization in Web-based courses are limited. The current study has two goals to close the disparities, as mentioned earlier. It first seeks to assess how web-based language instruction affects advanced EFL students' ability to self-regulate. Second, it looks into whether online language instruction impacts learners' self-actualization.

METHOD

Participants and Sample

At the start of the semester, 55 Iranian students were asked to take part in the study. However, in the final analysis after the Oxford Placement Test (OPT) administration, only 40 advanced students were selected. Therefore, the participants in the present study were 40 advanced EFL learners. The sample included both males (20) and females (20). Selected learners were approximately between 18 to 28 years old and were studying in a private language institute in Kerman, Iran. The non-probability and convenience sampling methods (Dörnyei, 2009) were utilized to choose the participants in the current study. In other words, participants in the current study who were "geographically proximity," "available at a specific time," "easily accessible," and "ready to volunteer" were included in the sample selection process. (Dörnyei, 2009, p. 99). The researcher also used the Oxford Placement Test (OPT) scores to choose a highly homogeneous group from the general population. Then, two classes were randomly selected and divided into the experimental (EG-N = 20) and control (CG-N = 20) groups. The learners studied English for at least five years in different language institutes. Most of the learners were locals, native speakers of Persian and advanced learners of English.

Instruments

The Academic Self-Regulation Questionnaire, the Short Index of Self-Actualization Inventory, and the Oxford Placement Test (OPD) were the instructional and testing tools used to gather the data for the study.

Oxford Placement Test (OPD)

Oxford Placement Test (OPT) is expected to be norm-referenced as a proficiency test and is aimed to "assess worldwide language abilities" (Brown, 2005, p. 2). There are 200 questions in the OPT version: 100 listening and 100 grammar questions (Allan, 2004). The test's first section evaluates the students' listening and reading abilities. Allan (2004) asserts that the OPT offers teachers a dependable and effective way to place students at the beginning of a course. The achieved reliability of the test must be calculated using the KR-21 measure of internal consistency to verify its reliability in the Iranian environment.

Short Index of Self Actualization Inventory (SISA)

The brief 15-item SISA index is a widely used scale for measuring self-actualization (Jones & Crandall, 1986). The SISA was created as a shorter, more accessible scale that closely relates to the lengthy Personal Orientation Inventory (POI) index (Shostrom, 1964). SISA was selected for this study because it has been validated numerous times and is substantially linked with POI (Richard & Jex, 1991). The 15 statements on the SISA scale are related to a person's thoughts, feelings, and emotions. Accepting points 1, 3, 4, 7, 10, 12, and 15 is a manifestation of self-actualization. Likewise, disagreement with the remaining items (2, 5, 6, 8, 9, 11, 13, and 14) is regarded to display self-actualization. A self-actualizing response from the four choices is given four points, whereas a non-self-actualizing reaction is given one point. For instance, if the subject checked "agree" for item 1, they would receive four points, and if they contained "disagree," they would receive one point. The SISA inventory has a maximum score of 60. One is said to exhibit self-actualization if their SISA score is more than 50.

Short Self-Regulation Questionnaire (SSRQ)

In the present study, the Short Self-Regulation Questionnaire (SSRQ), which Pichardo et al. (2014) designed with a focus on the Brown et al. (1999) questionnaire, was used. Previous research has demonstrated this instrument's validity, with alphas for the entire questionnaire and each of its four aspects ranging from 0.71 to 0.81. SSRQ consists of 17 items separated into four categories: (1) goal-setting (e.g., "I set goals for myself and keep track of my progress"); (2) perseverance (e.g., "I have much willpower"); (3) decision making (e.g., "I have trouble making up my mind about things"); and (4) learning from mistakes (e.g., "I don't seem to learn from my mistakes"). The responses are gathered using a Likert scale with a range of 1(not at all like me) to 5 (very much like me).

DATA COLLECTION PROCEDURES

First, all participants were asked to take Oxford Placement Test (OPT; Allan, 2004) to be confident that they were homogeneous, advanced English learners concerning their levels of language skills. The exam took an hour, and the learners had approximately 10 minutes to answer the listening questions and 50 minutes for the grammar. In the listening and grammar sections, students were required to select one of two right boxes.

In the second step, a pilot study was conducted to evaluate both questionnaires' internal consistency and reliability (self-regulation & self-actualization). To represent the whole sample of participants selected for the main study, these instruments were distributed to 15 advanced students who were selected randomly by simple random sampling (7 males & 8 females). The student's language proficiency was determined in advance. This investigation consists of three main phases: pretesting, web-based language teaching, and post-testing. After administering the OPT to homogenize the participants, the researcher randomly put them in two groups, i.e., control and experimental groups (CG & EG). Both groups of students (CG & EG) were given two tests of self-regulation and self-actualization as a pretest to assess their current status of academic self-regulation and actualization and to make sure that no significant difference in terms of these dependent variables exists between the CG and EG.

In the third place, all the experimental group learners were asked to have the zoom application installed on their computers. In the experimental group, students had to get online at a specific time. As Rahayu (2020) stated, ZOOM is an online media platform that is usually used for online instruction. This application is available on various platforms, including personal computers, laptops, Android phones, iPhones, and tablets. Teachers and students can connect in real-time thanks to this application. In this online context, people use a webcam and a microphone to communicate in real-time, enabling interactions that are similar to those in conventional classroom settings (Rahayu, 2020). In fact, through this application, language learners can participate in the class, show their views, and discuss matters related to the course. Also, students shared their projects, handouts, and PowerPoint slides. It should be noted that EG students experienced E-learning in the case of online education imposed by COVID-19.

On the other hand, Speroff (2016) asserts that to effectively use this application in the classroom for English language instruction, teachers have to consider a few things. The teacher sent some related links, which provided students with valuable materials. Based on specific instructions, the teacher also provided examples for her students to help them organize their perceptions. Therefore, the researcher, the class teacher, was properly oriented

to this app. Most of the procedures taken to teach the learners in the experimental group were compared to those in the control group.

However, during therapy, the CG was instructed face-to-face in a classroom and advised to refrain from using any applications while the EG receives web-based language instruction. In other words, the control group received a conventional method of teaching. They were taught and learned under the supervision of the teacher (researcher) in classroom conditions. They followed the traditional teaching practices in their textbook. Fortunately, none of the students were absent during the treatment, which would increase the results' reliability.

In the last step, to compare the effect of web-based language teaching on EFL learners' self-regulation and self-actualization before and after the treatment, the same questionnaires were given to both groups. Also, they were told that all the answers would remain anonymous. Finally, all the questionnaire scores were gathered for analysis and interpretation.

DATA ANALYSIS

The study employed one independent variable, web-based language teaching, and two dependent variables, academic self-regulation, and self-actualization. To answer this study's research questions, The Statistical Package for the Social Sciences (SPSS) version 24 was employed for descriptive and inferential statistics. Descriptive statistics were used to examine the data to determine the mean scores and standard deviations. Additionally, independent-sample t-tests were utilized to compare the results between the experimental and control groups before the intervention using inferential statistics to (1) determine their homogeneity in terms of self-regulation and self-actualization before the treatment (2) establish a baseline for the student's existing level of self-regulation and self-actualization so that the researcher compares the treatment's impact with the established baseline. An independent sample t-test was then used to compare the pretests and post-tests and determine whether the self-regulation and actualization status of the EFL learners in the experimental group is significantly different from that of the control group in the post-test.

RESULTS

The researcher performed several computations and statistical procedures that were extensively documented in order to test the hypotheses. Details of the procedure, which used both descriptive and inferential statistics, are provided below. An OPT was implemented to learn more about the degree of proficiency and homogeneity of all participants. The analyzed results of the descriptive statistics are illustrated in the below table.

Table 1: Descriptive Statistics for the OPT Administration

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	
OPT	55	41.50	34.00	70.00	57.0667	9.942	-.250	.254

Table 1 shows that the mean was determined to be 57.06 and the standard deviation to be 9.94. As a result, 40 of the 55 initial students were chosen as the homogenized sample of the study and had OPT scores between 34 and 70. Table 2 displays the validity of the test results

obtained from OPT administration phase participants. Utilizing Cronbach's alpha formula, a good dependability of 0.83 was attained.

Table 2: Reliability Statistics of OPT Administration

Cronbach's Alpha	No. of items
.83	70

Analyzing the Data Relevant to the First Research Question

RQ1. Does the employment of web-based language teaching make a statistically significant difference in advanced EFL learners' self-regulation?

In research question one, the effect of e-learning on advanced EFL learners' self-regulation was investigated. The self-regulation questionnaire's pre- and post-test mean scores for the two groups were then subjected to descriptive statistics and independent sample t-tests. The results are shown in the tables below. The following tables show the results of the self-regulation pretest, together with descriptive statistics and a t-test.

Table 3: Descriptive Statistics of the Two Groups' Mean Scores on Self-Regulation Pretest

	Groups	N	Mean	SD	Variance
self-regulation 1 (pretest)	Control	20	21.35	2.98	25.15
	Experimental	20	22.19	3.45	21.54

The mean scores for the control and experimental groups are 21.35 and 22.19, respectively, as seen in the above table. The two groups' standard deviations are 2.98 and 3.45. The means were subjected to an independent samples t-test to see whether the means were statistically different. Table 4 presents the findings.

Table 4: T-test for Comparing the Participants' Self-Regulation Score before the Treatment

		Levene's Test		t-test		
		F	Sig.	t	df	p
Self-Regulation	Equal variances assumed	.239	.626	-.027	58	.979
	Equal variances not assumed			-.027	57.655	.979

The variances of the two groups are equal, as shown in the table (F=0.23, p=0.62 > 0.05). Since equal variances are assumed, the data for the first condition are presented. The results also showed no statistically significant difference between the control and experimental groups' mean pretest scores (t=.027, df= 58, p= 0.97 > 0.05). Therefore, it can be convincingly claimed that there was no baseline difference between the two groups and that they had similar self-regulation levels before the therapy.

The two groups' means on the post-test for measuring self-regulation were subjected to descriptive statistics and an independent samples t-test to determine if the therapy impacted the participants' level of self-regulation. The results of descriptive statistics are shown in the table below.

Table 5: Descriptive Statistics of the Groups' Scores on Self-Regulation Post-test

	Groups	N	M	SD	Variance
Self-Regulation 2	Control	20	23.9	4.52	20.63
	Experimental	20	29.5	4.01	16.10

As Table 2 displays, the mean scores of the control and experimental groups on reading post-test are 23.9 and 29.5, respectively, which seems different. They were subjected to an independent sample t-test to see whether the means were statistically different or not. Results are presented in the following table.

Table 6: T-test for Comparing the Groups' Mean Scores on Self-Regulation Post-test

		Levene's Test		t-test for Equality of Means		
		F	Sig	t	df	p
Post-test	Equal variances Assumed	1.367	.247	-5.056	58	.001
	Equal variances not assumed			-5.056	57.173	.001

The variances of the two groups are equal, as shown in the table ($F=1.36$, $p=0.24 > 0.05$). Since equal variances are assumed, the data for the first condition are presented. The post-test results showed a statistically significant difference between the two groups' mean scores ($t=-5.05$, $df =58$, $p=0.001 < 0.05$). As a result, it can be convincingly argued that the experimental group is the winner and that e-learning had a statistically significant effect on the level of self-regulation in advanced EFL learners, rejecting the null hypothesis.

Analyzing the Data Relevant to the Second Research Question

RQ2. Does the employment of web-based language teaching make a statistically significant difference in advanced EFL learners' self-actualization?

The second research question focused on how advanced EFL learners' self-actualization was affected by e-learning. In doing so, two distinct independent sample t-tests were run on the mean scores of the two groups on the self-actualization pretest and post-test. The results are displayed in the sections that follow. The following tables show the results of the self-actualization pretest, including descriptive statistics and a t-test.

Table 7: Descriptive Statistics of the Two Groups' Mean Scores on Self-Actualization Pretest

	Groups	N	Mean	SD	Variance
self-actualization 1 (pretest)	Control	20	33.12	3.73	14.31
	Experimental	20	34.21	3.32	11.32

The mean scores for the control and experimental groups on the self-actualization pretest are 33.12 and 34.21, respectively, as seen in the above table. These results appear to be close to one another. They were subjected to an independent sample t-test to see whether the means were statistically different or not. The results are shown in the table below.

Table 8: T-test for Comparing the Self-Actualization Pretest of the Two Groups

		Levene's Test		t-test for Equality of Means		
		F	Sig	t	df	p
Pretest	Equal variances Assumed	.003	.954	.137	58	.892
	Equal variances not assumed			.137	57.996	.892

As it is demonstrated in the above table, the variances of the two groups were equal ($F=0.003$ $p=0.95 > 0.05$); therefore, the data in the first row in the above table are reported. The results of the above table (equal variances assumed), indicated that there was no statistical difference between the two groups' mean scores on the self-actualization pretest ($t=0.13$, $df=58$, $f=0.89 > 0.05$). Therefore, it may be claimed that the control and experimental scores on the self-actualization pretest did not initially differ from one another and were homogeneous.

The two groups' means on the post-test for self-actualization were subjected to descriptive statistics and an independent samples t-test to see whether e-learning had a significant effect on raising advanced EFL learners' self-actualization level. The table below displays the findings from descriptive statistics.

Table 9: Descriptive Statistics of the Two Groups' Mean Scores on Self-Actualization Post-test

	Groups	N	Mean	SD	Variance
self-actualization 2 (pretest)	Control	20	32.15	3.71	14.13
	Experimental	20	40.75	5.16	26.97

As it is shown in the above table, the mean scores of the control and experimental groups' scores on self-actualization post-test are 32.15 and 40.75, respectively. To investigate whether they are statistically different or not, they were submitted to an independent sample t-test. Results are displayed in the following table.

Table 10: T-test for Comparing the Self-Actualization Post-test of the Two Groups

		Levene's Test		t-test for Equality of Means		
		F	Sig	t	df	p
Post-test	Equal variances Assumed	7.164	.010	-5.872	58	.001
	Equal variances not assumed			-5.872	50	.001

Table 10 shows that the two groups' variances are not similar ($F=7.14$, $p=0.01 < 0.05$). Therefore, the data for the second condition (Equal variances not assumed) are reported. The post-test results showed a statistically significant difference between the two groups' mean scores ($t=-5.872$, $df=50$, $p=0.001 < 0.05$). Therefore, it can be convincingly stated that the experimental group benefits and the null hypothesis are rejected and that the level of self-actualization of advanced EFL learners was significantly impacted by the E-learning instruction.

DISCUSSION AND CONCLUSION

The vital aim of the study was to investigate the effect of E-Learning on advanced EFL learners' self-regulation and self-actualization. The statistical analysis of the data showed a significant difference in the mean scores on the self-regulation questionnaire between the control and experimental groups, which is relevant to the study's first research question. As a result, the researcher rejected the study's first null hypothesis because the experimental group's self-regulation level improved. It is worth bringing some justifications for the present results. In a recent study, Wang et al. (2021) examined technology-assisted self-regulated English language learning. They discovered a substantial beneficial link between students' English learning results and the usage of technology-based self-regulated learning methodologies. Kheiri et al. (2019) examined the impact of web-integrated education and feedback on the students' self-regulated learning in another study. Their research's conclusions demonstrated the beneficial impact of the aforementioned teaching on self-regulated learning, as the experimental group did better than the control one. Regarding the second research question of the study, the findings demonstrated that E-Learning had a noticeable impact on advanced EFL learners' self-actualization. Thus, the related null hypothesis is rejected.

Regarding learners' self-actualization, findings are compatible with the results of Nasri et al.'s (2021) research which investigated the Iranian students' L2 motivation and their views in a computer-assisted language learning context. Based on their results, CALL-based instruction promoted the students' motivation through the Motivation Questionnaire. Also, the CALL attitude questionnaire findings revealed the students' positive views toward using CALL-based instruction. Regarding the outcomes of the studies mentioned above and the current one, it is evident that E-learning significantly affected the EFL learners' self-regulation and self-actualization levels and may have some implications for language learning and teaching.

This study aimed to find out how advanced EFL learners in Iran could regulate their behavior and achieve self-actualization. As stated earlier, the literature abounds with studies that considered the major role of E-learning (Kheiri et al., 2019; Nasri et al., 2021; Wang et al., 2021) in determining EFL learners' pedagogical triumph in the classrooms. The researcher discovered that e-learning instruction had a favorable effect on students' levels of self-regulation and self-actualization based on the data analysis in the preceding chapter. Before the treatment, the independent sample t-test was used for both questionnaires to see whether there was a significant difference in the pretest mean scores between the experimental and control group of students. The results showed that at the start of the study, both groups' performances were comparable. Following treatment, an independent sample t-test was conducted to determine whether there were any appreciable differences in the post-test mean scores for self-regulation and self-actualization between the students in the control and experimental groups. According to the results, learners in the experimental group significantly outperformed those in the control group regarding self-control and self-actualization. Therefore, it may be stated that the experimental group successfully proved the null hypotheses wrong. In other words, e-learning significantly improved the self-control and self-actualization of advanced EFL learners. The results of this study will be extremely important for teachers, material creators, and instructors as they decide whether to invest additional money in creating and using online teaching materials.

As people with different learning environments might have different performance outcomes and benefit from different modalities of learning and materials, paying attention to this key point is vital for teachers, syllabus designers, and the students themselves. Additionally, focusing on this issue while assessing students' learning would result in a more

accurate evaluation of their language ability, which might lead to more successful language teaching and learning. Iran's educational system may not yet allow online learning; instead, it strongly emphasizes classrooms with more traditional teaching methods. It's possible that students are not yet prepared to embrace electronic instruction fully. Therefore, it is necessary to increase students' ability to adopt a computer-assisted language learning environment to improve EFL learners' psychological requirements, which are crucial in the language learning process. As explained below, the study's findings may have various effects on language learners, syllabus designers, and second-language teachers.

The study found a statistically significant and advantageous influence between E-learning instruction and EFL learners' self-regulation and self-actualization levels. The results have implications for EFL instructors to inspire and instruct their learners to self-regulation and self-actualization, which can lead to effective use of the learning process. Before creating classroom activities in this study, teachers must carefully consider how much of a safe online learning environment they can offer to encourage students to take ownership of their education. They should carefully plan lessons to equip students with the skills needed to function independently, support them in making wise decisions, and motivate them to develop new skills by viewing them as active participants in the learning process.

As providers of a significant percentage of the language learning environment, syllabus designers play a crucial role in facilitating the process. They have to provide the content of teaching materials with the proper exercises to language learners with computer techniques. They lead them toward their goals which are EFL learners' psychological needs. Moreover, they should provide some handbooks for teachers to familiarize them with technology and computer-assisted language learning instruction. This will allow teachers to teach effectively and motivate students and be more autonomous in the language learning process. The findings of this study can assist curriculum creators and authors in creating more effective and inspiring books. They can get students involved in computer-based exercises and activities. Language acquisition is a multifaceted phenomenon; thus, to facilitate and maximize this challenging process, language teachers and syllabus designers, and language learners must play their parts effectively. The current study's findings have consequences for language learners by motivating them to become more aware, autonomous, and critical of their psychological development, particularly in terms of their degrees of self-control and self-actualization.

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