Hindawi

Research Article

Scrutinizing the Effects of e-Learning on Enhancing EFL Learners' Reading Comprehension and Reading Motivation

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Technology-based teaching and learning are always an innovative technique that absorbs many researchers' attention throughout the words. Considering the vital role of online learning, this study aimed to examine the effects of e-learning on Iranian EFL learners' reading comprehension and reading motivation. To this end, the OQPT was given to 101 Iranian EFL learners, and 60 of them who were at the intermediate level were selected as the participants of the study. Then, they were randomly divided into two groups: one experimental group (EG) ($n = 30$) and one control group (CG) ($n = 30$). After that, a reading comprehension test and a reading motivation questionnaire were administered to both groups as the pretests of the study. After pretesting, the participants of the EG received the treatment through e-learning. Eight lessons of Connect Book 4 were taught to the experimental participants online. On the other side, the participants of the CG were taught traditionally, through a face-to-face fashion. In the last session, a reading comprehension test and a reading motivation questionnaire were again given to both groups. The independent-samples *t*-test revealed that the EG outflanked the CG on the posttests. The e-learning instruction aided Iranian EFL learners in enhancing their reading comprehension and reading motivation. Regarding the findings of this study, some implications are mentioned for learners, teachers, and curriculum designers.

1. Introduction

E-learning is an excellent alternative to traditional teaching methods. Waterhouse [1] defines it as computer-mediated learning and teaching environment that may be used to develop the application of learning and teaching principles and practices. On the other hand, e-learning is described as the use of modern multimedia technologies and the Internet to enhance the quality of learning by making it easier to access information and services and engage in remote exchange and cooperation. Rosenberg [2] defines e-learning as the ability to save, share, and update data, but Horton [3] argues that e-learning provides the accumulation of learning experiences in information and computer technology by building up a database of information and computer technology. We must emphasize that all definitions agree that e-learning includes computer technology to promote and improve learning.

In the words of Walabe and Luppicini [4], "e-learning" alludes to courses that make use of technology and the Internet to give students with positive learning possibilities. However, using technology in education is not as straightforward as it seems, given the large number of factors that play a role in it and how they are interconnected. Dhawan [5] also feels that since e-learning is student-centered and provides excellent flexibility in terms of time and place, Internet usage in e-learning has a significant impact on the learning process, as shown by his research. Saleem and Rasheed [6] suggest that the primary purpose of e-learning is to expand the affordability of education while simultaneously lowering expenses and time spent on education while also enhancing students' educational attainment.

A large number of instructors all around the globe have embraced electronic learning methodologies [7]. E-learning may be described as the delivery of training content via the use of information and communication technology (ICT), which can include the Internet, CD-ROMs, DVDs, cellphones, and other media, both within and outside of the classrooms, and can take place both online and offline [8]. E-learning may facilitate active learning by removing the constraints of time and geography. Through various learning activities, content can be controlled, and the quality of teaching can be enhanced. For instance, a learning management system (LMS) can significantly affect participants' involvement with the environment, change collaboration and communication, and assist students in accessing learning materials [9, 10]. E-learning has also brought about substantial progress in educational contexts in the 21st century, owing to Web-based communication, collaboration, multimedia, and information transmission to benefit students and teachers [11]. At this point, it is clear that the efficiency of the abovementioned e-learning approach may be assessed in terms of how well it can be used in the teaching and learning process of reading comprehension.

For the purposes of this definition, pure e-learning means simply using e-learning materials and not including any in-person instruction. The distinction between pure e-learning and fully online learning is the delivery platform, not the content itself. When it comes to e-learning, a Web-based delivery platform is required; however, DVDs or other media may be used to transmit instructional information, for example. In the classroom and outside of it, e-learning is combined with a more conventional lecture-based kind of learning [12].

E-learning may be utilized in the context of English as a foreign language to improve the reading comprehension of EFL students. Reading comprehension is kept in mind since paying to the meaning of a message is just as essential as attending to the linguistic forms while giving a massage [13]. According to Calet et al. [14], the reading comprehension skill is one of the most crucial transversal abilities for achieving academic success in both school and society. Engagement and participation with written language are required for reading comprehension, which concurrently obtains and produces meaning [15]. When it comes to reading comprehension, according to Babapour et al. [16], it is a complicated cognitive process in which the reader's past knowledge and experiences play critical roles in their understanding of the text. Reading comprehension is a complex cognitive process that includes interaction between the reader, the text, and the surrounding environment. Reading comprehension is the process of deciphering lexical information, phrases, and discourses in a written text. A cohesive representation of the text in memory is required to understand a text effectively. Vocabulary knowledge is essential for reading comprehension in English as a foreign language [17].

Motivation to read plays a vital part in increasing reading comprehension. Students' motivation to study a foreign language is essential to their success [18]. It is vital in attaining learning goals [19]. Learners who are motivated are more likely to participate in learning activities that will assist them in learning and achieving their learning objectives because they will pay attention and spend their time efficiently throughout instruction and learning [20]. Using various motivating tactics in the classroom would have a favorable effect on learners' learning success [21]. According to the findings of this research, students' learning motivation might impact their learning accomplishment. Dja'far et al. [22] contend that there are differences in learning outcomes between low- and high-motivation groups of students in ESP/EFL reading and writing portions of ESP/EFL and that these differences are based on motivation. Motivation may thus have an impact on a participant's ability to learn [23, 24].

According to research, reading motivation plays a vital role in reading engagement, which impacts the outcomes of reading performance and academic success. It has to do with one's mental preparedness, willingness, beliefs, and perceptions to participate in a reading activity, among other things [25]. Students' reading motivation may be influenced by their passions, effectiveness, and objectives, which can help them achieve better comprehension results [26, 27]. Middle went on to say that increasing motivation may help to enhance comprehension results in some instances. Initially, a reading motivation strategy was developed to get higher comprehension results throughout teaching and learning. Students will not improve their understanding unless they are motivated to interact with the reading text. Learners' inability to read because of a lack of reading desire is common [28]. Consequently, reading motivation is critical to complete reading comprehension [29, 30]. By engaging students in the teaching and learning process, instructors should create a learning environment that is dynamic and pleasant for all learners [31]. In this regard, instructors must enhance learners' reading drive while also creating an engaging learning environment.

Taken together, teachers and learners will benefit from enhanced performance and quality as a result of technological advancements, according to experts. Technology may also bring about educational development and solve challenges that influence learning, teaching, and social organization in the classroom and outside. As a result, technology can be viewed as a tool and a trigger for social change. Understanding the interaction between educational

technology and the teaching-learning process is critical. The use of technology has dramatically transformed the method in which pupils study. For instance, technology has provided us with a plethora of new teaching methods such as online courses, video streaming, models, games, and teacher-to-student conversations. Regarding the significance of reading motivation and reading comprehension in learning the English language, this study intended to investigate the effects of e-learning on Iranian EFL learners' reading motivation and reading comprehension.

2. Review of the Literature

E-learning environments have gained the world of higher education's attention; several researchers focused on e-learning and tried to explain this environment. According to Banks [32], electronic learning is a new educational alternative. Students no longer have to travel to campuses and attend classes at a specific time and place. Instead, they can receive their educational goals besides their ordinary lifestyle. This method in the educational system helps students save time and helps them in the expenses associated with traveling to or living on campus. He continued that students usually can access online chats, recorded lectures, and other virtual opportunities to interact with instructors and other classmates. Some sessions require virtual attendance on specific days and times, and assignments have to be done on a particular date, but generally, everything is available any time of day or night for the convenience of students.

By increasing the technology in the educational system, the traditional form of education has been revolutionized. It leads the education toward modern technology-based learning and teaching process. Different kinds of technological tools have been developed because of the high demand for learners in higher education. E-learning is one of the most crucial innovations in the educational system. E-learning can be defined as the application of broadband Internet and computers to facilitate the learning and teaching process [32, 33].

Pop [34] defined e-learning as an online interaction between students and teachers. Accordingly, the courses are taught online even if the teacher and students are at the building. There are students' and their teachers' choices for instruction. So, he tried to illustrate e-learning as online learning for every student in the same place or anywhere else. Furthermore, he defined distance learning and claimed that although distance learning is often used as a synonym for the online learning term, it was established first to attract and gather students worldwide. Many universities are now suggesting distance learning programs to every student. Students in a foreign country such as Europe can attend an American university without traveling to the USA.

Using e-learning has enabled universities to solve geographical restrictions. Universities have been expanded to the global level. Students are not limited in choosing universities; they can educate in a university wherever they desire. According to Shaba [35], e-learning initiatives will directly impact the future structure of universities on both strategic and technical levels. Based on O'Hearn's [36] work,

modern academic institutions need to be capable of adapting to new technologies in the classroom and broadening the scope of their students' learning opportunities.

Laurillard [37] used a cognitive/constructivist approach when it comes to learning. Throughout his career, he has focused on the relationship between instructors and individual students. In terms of the conversational framework, Laurillard believes that learning technologies may assist them in meeting the standards for academic learning that have been established. The author Salmon [38] identified five phases of e-learning, including access to motivation, online socializing, information interchange, knowledge production, and growth. Sebastien's approach is based on the constructivist philosophy of learning. The approach offers a framework for e-learning in which learners participate in online dialogues with their instructors. It indicates that cognitive/constructivist exercises and open conversation are required.

On the other hand, Conole and colleagues [39] put a strong focus on social processes, which were promoted by interactions between learners and tutors. The approach has been created to assist instructors in designing more effective learning activities for their students. The model takes a constructivist approach that is mediated by social interaction. Pedagogically, Steffe and Gale [40] signified the three pedagogical learning theories: behaviorist, constructivist, and collaborative. He stated that learning theories could be implemented within the e-learning process.

Learning theories were developed to provide a foundation for understanding how individuals learn and a means to describe, characterize, evaluate, and forecast how learning should happen in a given situation. E-learning specialists must know the mechanism of learning since they are assisting others in their learning endeavors. When learning theories are analyzed for their advantages and shortcomings, administrators may mix and implement a mixture of learning theories that best meet their students' requirements [41]. Aside from that, learning styles assist e-learning experts in the formulation of e-learning techniques, which ultimately helps them in motivating students, assisting in the reinforcement of personality, facilitating the cognitive procedure, providing rapid response and feedback, identifying and meeting the unique requirements of each student, and supporting them throughout the whole training and development program.

In the field of e-learning, constructivist learning theory is the theory that is still extensively employed by those in the area. According to this idea, students evaluate and encode knowledge based on their own unique experiences and perceptions rather than from a textbook. Learners carry a plethora of life experiences that serve as the basis for their subsequent learning. Through the lens of their personal experiences, they evaluate, reason, synthesize, and produce innovative thoughts or refine existing ones. This indicates that when students can relate the material to a personal meaning or experience, they learn more effectively. The notion is applied in e-learning by presenting real-life views to students via simulations or storytelling, therefore providing learners with something to which they can connect or with which they may develop an emotional connection.

An additional important learning theory that supports online learning courses is the active learning theory, which is a current learning theory similar to the constructivist learning theory and is most often utilized in e-learning programs these days. When students learn by doing, they know more effectively. According to the active learning hypothesis, to learn more effectively, learners must be deeply involved or participate in the learning process at all times. Interactivities, gamification, quizzes, and exercises are all parts of e-learning that conform to the active learning paradigm, and they are all used in conjunction with one another. Each theory gives a unique perspective on the subject in terms of learning and the basic factors that make learning happen. Suppose e-learning experts want to build a successful e-learning course for contemporary students. In that case, they must use several e-learning tactics while also keeping in mind the learning theories they subscribe to aid them in learning and remembering material more effectively. Each theory has impacted and changed educational practices and procedures, and new theories will proceed to have an impact in this way. To create practical training, e-learning developers must first determine the training objective and then pick the most appropriate theoretical framework, or a mix of theoretical frameworks, to aid in achieving those learning goals.

In terms of e-learning and motivation, the main idea connects the two. The self-determination theory (also known as SDT) is a macro-theory of human motivation that connects development with fundamental psychological needs. SDT, developed by Ryan and Deci [42], asserts that human behavior is driven by a desire to improve oneself. The sub-theories of e-learning design that may involve students include proficiency, autonomy, and connectedness.

The analysis of the previous theories shows that learning theories focus on constructivism. It is a new movement that focuses on a student-centered rather than a teacher-centered approach. It asks for building knowledge rather than receiving it. Nash [43] emphasized that e-learning is naturally rooted in the constructivist movement, where the construction of knowledge could occur in personal background with social collaboration and experience. Consequently, the previous models encourage collaborative learning rooted in the constructivist learning theory.

According to Alexander [44], seven positive learning outcomes resulted from students' use of e-learning, including (1) the opportunity for students to communicate with others nationally and globally and obtain a more advanced and global comprehension of international political issues, while also gaining information technology literacy in the process; (2) increased comprehension that participants are known to have difficulties comprehending across a variety of disciplines, through the use of interactive multimedia animations, simulations, and microworlds; (3) enhancing communication between part-time students and their lecturer through the use of a computer-based conferencing tool over the Internet; (4) the progression of information and technological literacy in the context of learning to solve real-world problems through the use of databases and email; (5) acquiring information such as language learning, where a high component of factual recall is required; and (6) learning the skills and knowledge of a specific subject. Learners may examine their understanding of subjects with computer-based qualitative and quantitative assessment modules, which they can access through simulations through the Internet.

Other benefits of e-learning encompass enhanced access to academic material at a time suitable for the student; personalized or individualized learning, in which the student decides on the amount, speed, and location of the learning opportunity, allowing personal modification of the educational experiences and meeting of individual learner activity; and allocation of systematic and coherent training to a more significant number of students all over the universe [8, 45]. According to Ruggeri et al. [8], advocates of e-learning have claimed some purported advantages derived from both electronic only and integrated types of e-learning, such as time and location versatility and ease of access, lower training costs and time dedication, self-directed and self-paced learning by empowering learner-centered exercises, cooperative learning atmosphere, constructs widespread groups, streamlined course distribution, unrestricted access to e-learning material, personal exposure to learning, just-in-time learning, workforce training supervising, and allowing knowledge to be refreshed and retained in a more fast and effective manner.

While e-learning offers benefits over conventional learning environments, it also has substantial limitations. The instructor can view collaborative learning in the traditional classroom, and learners can readily interact with their peers. Nevertheless, in an e-learning context, learners are often separated from one another and the instructor, making it extremely difficult to foster a sense of belonging [46, 47]. Disadvantages of e-learning include expenditures associated with technology and employees required; however, most costs appear to come during the development stage of the e-learning course, and social exclusion or a lack of contact among e-learning activity or course members. The loss of face-to-face networking and group contact might be seen as a significant disadvantage, making e-learning less appealing and less efficient. Weak instructional design, technological issues, and de-individualized education are potential drawbacks of e-learning [48].

There has been a lot of research done on the impact of e-learning on language acquisition. Using e-learning, Shen and Suwanthep [49] looked at the effects of constructive role-play on Chinese EFL students' ability to speak English in college classrooms. The random sample of 260 students was divided into 130 students each: the experimental and CGs. Surveys, questionnaires, and interviews with students have been used to gather data throughout 18 weeks of education. Learners' speaking skills improved due to using constructive role-plays in their e-learning. According to their responses, e-learning beneficial role-plays were also praised by pupils.

The goal of the study by Alshehab [50] was to examine the influence of the Internet and e-learning approaches on students' capacity to translate from English to Arabic. Jordan's Irbid National University (INU) English

Department was used. There were 40 translation students included in the random sample. Both experimental and CGs consisted of the same people. On the posttest, the EG fared better than the CG.

Shahi [51] looked into the effects of e-learning on the development of Iranian EFL learners' language learning anxiety throughout their studies. The participants who took part in this research were English as a foreign language (EFL) university students majoring in computer engineering and information technology (information technology). Multiple-choice, fill in the blank, substitution, and written form questions were included in the pre- and posttests for hearing comprehension, reading comprehension, and grammar points. Two classes were chosen at random in the research to serve as the CG and the EG. Many activities and resources made available by e-learning have been discussed, along with an analysis of how they might be utilized to improve EFL students' language competency and autonomous learning in the process. This research aimed to expose a group of Iranian students to an e-learning application and determine whether or not this exposure had any influence on their learning anxiety. In conclusion, the findings indicated that a multimedia environment lowered students' anxiety and made for a less stressful classroom atmosphere.

Kurucova et al. [52] did a study that examined the effectiveness of e-learning and blended-learning modalities in higher education. They divided students into three groups based on the different types of online education employed in each group. The first group (18 learners) received their education only via e-learning, the second group (20 students) received their education through the traditional face-to-face technique, and the third group (18 students) received their education through a mixed learning strategy. In the online education model, learners may participate in interactive webinars with a native speaker who gives them real-time feedback on their tasks. The blended-learning approach seems to be the most effective learning method in the media/journalism study program. By comparing the results of the pre- and posttests, we were able to identify the specific language abilities that had increased in each of the three test groups. The scores of the students in the blended-learning group improved considerably in all four of the categories tested (reading, speaking, listening, and vocabulary) compared with the CG. It was found that vocabulary was the most improved language skill in both groups (e-learning and classic), indicating that both groups had made significant gains in this area. Learners' performance in listening and speaking abilities improved significantly due to the online technique, which may be a good predictor of how they would do in their future employment.

Ismail and Rahmat [53] studied the impact of Moodle e-learning on the reading comprehension of EFL students in a classroom setting. The research respondents were 27 college students learning English as a foreign language. The information was gathered by administering a pretest and a posttest on reading comprehension. The data analysis was divided into three steps: the normality test, the homogeneity test, and the hypothesis testing. The statistical software package for social science (SPSS) was used for the window in all three stages of the study. The findings revealed that the usage of Moodle e-learning had a statistically significant impact on enhancing students' reading comprehension skills.

Rahmawati and colleagues [54] sought to determine whether e-learning impacts the advancement of students' speaking skills and to understand the method by which students' speaking skills develop while participating in e-learning. This study used quantitative tools in conjunction with a descriptive approach. The study population consisted of students from SMP Pencawan Medan who were in the seventh grade of junior high school and selected those kids. The information was gathered by first explaining the recorded content verbally to the WhatsApp group, which consisted of 20 students, and then having the students record themselves speaking to capture the audio of their voice. From the score table during the pandemic, the findings show that in seventh-grade students at SMP Pencawan Medan who can comprehend 20 participants who have experienced a decrease in speaking during face-to-face learning before pandemic than e-learning, there were two students with excellent categories, no students with friendly classes, eight participants with adequate classifications, and ten students with not sufficiently satisfactory categories. The researchers discover specific issues, including pronunciation, fluency, vocabulary, and accuracy. While students feel ashamed to talk and lazy to speak English throughout the e-learning process, there is a decrease in their vocabulary, a reduction in their pronunciation, and a decrease in their fluency and accuracy when speaking.

The literature study leads us to conclude that electronic learning is a vital instrument that should be utilized to augment face-to-face English language sessions. It contains a variety of activities and materials that, if used by students and supervised by the instructor, can improve the learners' language competency in the target language. As the world progresses, we must use technology and adapt our lives to keep up with the times. According to the findings of the literature study, multimedia settings positively influence the language acquisition of EFL students in Iran.

According to past research findings, participants feel that computer-assisted learning environments are the most effective method of learning English. According to the results of earlier research, English teachers might be more aware of their students' psychological requirements when they are learning a foreign language throughout language acquisition. Furthermore, they should offer appropriate multimedia education in the classroom to assist students in overcoming their apprehension about learning a foreign language. Based on the findings of the previous research, it is possible to infer that e-learning role-plays have a favorable impact on students' language competency of varying degrees of proficiency in the target language. Moreover, to the best of researchers' knowledge, insufficient studies have been done in the Iranian context on e-learning and its effect on reading comprehension and motivation. As a result, the purpose of this research was to investigate the impact of e-learning on Iranian EFL learners' reading comprehension and desire to read more. Two research questions were established following the aims of the study:

RQ 1. Does e-learning have any significant effect on improving Iranian EFL learners' reading comprehension?

RQ 2. Does e-learning have any significant effect on improving Iranian EFL learners' reading motivation?

3. Method

3.1. Participants. A total of 101 participants at an English Language Institute in Ahvaz, Iran, were chosen to participate in this study, which resulted in the selection of 60 Iranian intermediate EFL learners. The participants' ages ranged from 20 to 33 years, and they were all female in gender. Due to gender segregation in Iran, it was impossible to access male participants. Since 2014, the participants have been studying English as a second or foreign language. The participants' level of English language competence was measured by giving the Oxford Quick Placement Test (OXF) (OQPT). The participants were chosen using the convenience sampling approach, which was implemented. The subjects who were chosen were separated into two groups at random: the EG and the CG.

3.2. Instruments. To homogenize the respondents in this study, the first tool employed was a proficiency examination, namely the Oxford Quick Placement Test (OQPT). To measure their English language proficiency, it was administered to 101 students. Students with scores between 30 and 47 (of 60) were classified as intermediate learners and were chosen to be part of the CG and EG programs' target respondents.

The second tool applied in this research to gather the needed data was a researcher-made reading pretest prepared according to the contents of the participants' course book. It was a reading comprehension test of 40 objective questions. It had true or false, fill in the blanks, and multiple-choice questions. The reliability of the mentioned instrument was 0.87 ($r = 0.87$), which was measured using the KR-21 formula. Moreover, the validity of the pretest was verified by four English instructors.

The other instrument applied in this study was a researcher-made reading posttest. The researchers made subtle differences in the pretest and used it as the posttest. All characteristics of the reading posttest, including the items' contents and the number of the items, were similar to the reading pretest. The researchers changed only the items' order and the options to remove the participants' pretest reminding. The posttest was administered to assess the influences of the treatment on the students' reading comprehension development. The posttest was validated by those who did the pretest. Moreover, the reliability was checked through the KR-21 formula, and it was 0.91.

The fourth instrument utilized in this study was the Motivation for Reading Questionnaire (MRQ) adopted from Wigfield and Guthrie [55]. It included 30 items that measured seven aspects of reading motivation: reading for grades, reading curiosity, reading efficacy, reading involvement, recognition for reading, the importance of reading, and reading challenge. MRQ used a five-point Likert scale including "strongly disagree," "disagree," "neutral," "agree," and "strongly agree." The researchers calculated the reliability of this instrument via Cronbach's alpha test ($r = 0.87$). Also, the validity of the MRQ was confirmed by a panel of English instructors. The MRQ was applied both as the pretest and as the posttest of this research.

3.3. Data Collection Procedures and Analyses. To conduct this research, the OQPT was given to all participants to demonstrate their homogeneity in terms of English language skills. Sixty individuals were chosen from a total of 101 for this study's target group. The students were then placed into two equal groups, one for each of the two conditions: EG and CG. Afterward, the participants of both groups were pretested on reading comprehension and reading motivation. Then, the EG received the treatment through e-learning. Eight lessons of the Connect Book 4 were taught to the participants online. Each part of the lesson was instructed to the EG online. All activities were done in the WhatsApp application.

On the other hand, the participants of the CG were deprived of e-learning instruction. They were taught traditionally, through a face-to-face fashion. The students attended the real class, and the researcher taught the lesson to them directly. After teaching eight lessons, the reading comprehension posttest and the reading motivation posttest were given to the participants of both groups to determine the impacts of the treatment on their reading comprehension and motivation. The gathered data were analyzed using SPSS software, version 22. Firstly, descriptive statistics such as means and standard deviations were calculated. Secondly, an independent-samples *t*-test was run to measure the effects of the treatment on the participants' reading motivation and reading comprehension.

4. Results

The gathered data were analyzed to answer the research questions. The details of the results are presented in the following tables.

Both groups' reading comprehension pretest statistics are depicted in Table 1. The mean score of the CG is 12.93, and the mean score of the EG is 13.50. The mean scores of both groups seem almost similar before receiving the instruction.

The differences between the mean scores of the two groups on the reading pretests are shown in Table 2. Given that the Sig value in this table is more than 0.05, it is reasonable to assume that there is no statistically significant difference between the reading pretests of the two groups.

In Table 3, the mean scores of the two groups on the reading posttests are indicated. The CG's mean score is 14.23, and the mean score of the EG is 17.50. It appears that the EG outflanked the CG on the reading posttest. This claim is tested in Table 4 using an independent-samples *t*-test:

Table 4 shows that Sig (0.00) is less than 0.05, meaning that there are significant differences between the reading comprehension posttests of the two groups. Here, we can

TABLE 1: Means and standard deviations of both groups on the reading comprehension pretest.

Groups	N	Mean	Std. deviation	Std. error mean
CG	30	12.93	2.13	0.38
EG	30	13.50	2.19	0.40

TABLE 2: Independent-samples *t*-test (reading comprehension pretest).

		Levene's test for equality of variances		*t*-test for equality of means					95% confidence interval of the difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	Lower	Upper
Scores	Equal variances assumed	0.03	0.85	1.01	58	0.31	−0.56	0.55	−1.68	0.55
	Equal variances not assumed			1.01	57.95	0.31	−0.56	0.55	−1.68	0.55

TABLE 3: Means and standard deviations of both groups on the reading comprehension posttest.

Groups	N	Mean	Std. deviation	Std. error mean
CG	30	14.23	2.29	0.41
EG	30	17.50	2.12	0.38

TABLE 4: Independent-samples *t*-test (reading comprehension posttest).

		Levene's test for equality of variances		*t*-test for equality of means					95% confidence interval of the difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	Lower	Upper
Scores	Equal variances assumed	0.01	0.916	6.65	58	0.00	−3.80	0.57	−4.94	−2.65
	Equal variances not assumed			6.65	57.69	0.00	−3.80	0.57	−4.94	−2.65

TABLE 5: Means and standard deviations of both groups on the reading motivation pretest.

Groups	N	Mean	Std. deviation	Std. error mean
CG	30	71.76	20.54	3.75
EG	30	70.30	21.95	4.00

claim that the EG had better performance on their reading posttest than the CG.

In Table 5, the mean scores of the experimental and the CGs on the reading motivation pretests are depicted (CG = 71.76 and EG = 70.30). The reading motivation of both groups is at the same level on the pretest.

As shown in Table 6, the *Sig* value is higher than 0.05; therefore, the two groups had the same reading motivation level before the treatment started.

According to the findings mentioned in Table 7, the mean score of the EG is higher than the mean score of the CG on the posttest of reading motivation than the EG.

When Sig (0.00) is less than 0.05, it indicates a statistically significant difference between the reading comprehension posttests of the two groups, as shown in Table 8. In this case, we may infer that the experimental individuals performed much better on their reading posttest when compared to the control group participants.

TABLE 6: Independent-samples *t*-test (reading motivation pretest).

		Levene's test for equality of variances		*t*-test for equality of means						
		F	Sig.	T	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Scores	Equal variances assumed	0.13	0.71	0.26	58	0.79	1.46	5.48	−9.52	12.45
	Equal variances not assumed			0.26	57.748	0.79	1.46	5.48	−9.52	12.45

TABLE 7: Means and standard deviations of both groups on the reading motivation posttest.

Groups	N	Mean	Std. deviation	Std. error mean
CG	30	74.13	22.51	4.11
EG	30	111.86	13.92	2.54

TABLE 8: Independent-samples *t*-test (reading motivation posttest).

		Levene's test for equality of variances		*t*-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Scores	Equal variances assumed	18.11	0.00	−7.80	58	0.00	−37.73	4.83	−47.40	−28.05
	Equal variances not assumed			−7.80	48.35	0.00	−37.73	4.83	−47.45	−28.01

5. Discussion and Conclusion

To answer the research questions, the researchers used the independent-samples *t*-test. The findings showed that the experimental participants who received instruction through e-learning had better performance on their posttests than their counterparts in the CG. The outcomes of this study are supported by Shen and Suwanthep [49], who showed that the e-learning constructive role-plays had positive effects on improving students' speaking skills. In addition, our research results follow Mardiah [56], who conducted research on the impacts of e-learning on students' speaking skills and confirmed the effectiveness of e-learning on students' speaking skills. Moreover, Mohammadi et al. [57] corroborated our results, who proved the effects of e-learning on language learning among EFL learners. Furthermore, our results are in line with Harandi [58], who indicated that e-learning had a positive impact on increasing Iranian EFL learners' motivation.

Moreover, the results of our study are compatible with Ismail and Rahmat [53], who indicated that the use of Moodle e-learning had significant effects on developing students' reading comprehension. In addition, the findings of this study follow Shahi [51], who examined the impacts of e-learning on developing Iranian EFL learners' language

learning anxiety. Their study indicated that e-learning reduced students' anxiety and provided a less stressful classroom setting. In addition, the constructivism learning theory, which emphasizes the building of knowledge based on the student's prior experiences, supports this research. Some researchers (e.g., [59–62]) believe that constructivism is a good fit for e-learning because it ensures learning among learners.

Some students may feel nervous when learning a foreign language in a face-to-face fashion since they do not like to face the teacher directly. Therefore, using e-learning teaching may reduce their learning anxiety. One reason for the results of this study is the fact that e-learning can save a large amount of money, time, and energy. Through e-learning, students do not have to use public transportation, and saving fuel costs can be substantial if they do not have to commute. Students enrolled at virtual institutions do not have to worry about dealing with the hassles of travel and transportation since online lessons may be completed from the comfort of one's own home.

The other justification for the results of this study can be that e-learning paves the way for the students to continue education and make their career at the same time. Students can have their full-time job while educating. In addition, using e-learning, students have the freedom to learn at their

convenience, and they can easily access the curriculum from the comfort of their homes.

When compared to traditional classrooms, e-learning has the potential to be a valuable platform for delivering a variety of delivery techniques for a variety of various sorts of learners. Furthermore, e-learning is a powerful tool since it allows learners to build their unique learning methods while improving their academic achievement. E-learning allows learners to actively engage in a learning environment to enhance their critical thinking skills and study independently [63]. Students may benefit from systematic courses since it delivers knowledge and tasks shown through animations, sounds, and videos to complete. One of the most significant facilities of e-learning is the recording of all online classes and presenting them to the students. Some students might miss the fortune to be online at a particular time or might not fully understand the lecture; they can easily use the record of the classes several times to learn effectively, while in traditional learning, students can only benefit from the classroom once and they do not have the second chance in their absence. The positive features mentioned for e-learning can be why the EG outperformed the CG on the posttests.

This research aimed to investigate the impact of e-learning on Iranian EFL learners' reading comprehension and desire to read. This study revealed that e-learning in teaching and learning might lead to favorable outcomes. We may state that e-learning is an essential tool that should be used with face-to-face EFL lessons to complement the curriculum. It contains a variety of activities and materials that, if utilized by learners and supervised by the instructor, have the potential to improve the learners' language competency in the target language. As the world evolves, we must use technology and adapt our lives to keep up with the pace of change. Regarding the importance of e-learning, teachers and material designers implement e-learning in classes to help students learn a foreign language more successfully.

Based on this research, it is possible to infer that various online instruments may have varying impacts on acquiring multiple parts of the language. The following implication is that subscribing to a single online tool may not always result in the desired outcomes. As a result of the fact that all Iranian schools and institutes do not have access to the Internet, computers, or other online tools, that the speed of the Internet is inconsistent in some areas, and that some students do not have access to smartphones, tablets, or computers, a mixture of online learning and face-to-face learning is suggested in Iranian environments.

The successful integration of e-learning tools into language classes requires a degree of online media literacy on the side of both teachers and learners. This leads to the conclusion that teachers need first to familiarize themselves with online learning tools and allocate a part of the class time to teaching these techniques to students. Teachers may also encourage the use of more productive and effective online tools and discourage counterproductive or less productive ones depending on the learning purpose. The findings of this study can help teachers to use both the e-learning method and traditional method in their classes.

The results of this study can encourage students to learn the lessons through using e-learning. Shy students can use online learning to improve their English language. Online learning enables students to work at a convenient time and location for their learning requirements. Online courses can provide additional possibilities for students in "small, rural, or poor socioeconomic school districts" ([64], p. 21) to take courses that might otherwise be unavailable. Online courses are a terrific method for students to increase their educational possibilities while remaining competitive in the ever-changing field of education. The ability to access course materials at any time is one of the most appealing features of online education. It is up to the student to revisit and reinforce what they have learned at their speed and convenience. Students may attend lectures or tutorials as required, on-demand, and with simplicity. Preparing for tests, on the other hand, is no longer an intimidating undertaking. Students may access the course materials at any time they see fit.

Additionally, they have the option of taking practice tests and mock examinations online to have a better idea of their level of preparation. Students' test scores obviously improve when they take online courses. Participants get a sense of competition when their scores are posted for everyone to see. Having a high level of competition drives them to work even more challenging. While compared to a traditional classroom, the student is a lot more confident in sharing their ideas and opinions, as some individuals find public speaking a little intimidating. Students may more freely express themselves and ask questions since the learning environment is virtual. As a student, you have the option of combining your studies with other commitments. Because of the convenience and flexibility of online education, this is achievable. Students who maintain a healthy work-life balance can better meet their other responsibilities. With the help of online learning tools, instructors may take advantage of their students' unique learning curves and styles in the classroom. Students and instructors may work together to reach set goals in various online learning environments that allow for self-paced learning. Thanks to online learning alternatives, teachers may devote more time and energy to pedagogical functionality. Teaching becomes a more adaptable and inventive sector that prioritizes students first when instructors can use technology to automate grading, offer assessments digitally, and monitor progress. In addition to allowing students to go beyond the goals of their courses, online learning allows them to explore and study outside of the classroom in a manner that is useful, relevant to today's rising use of technology, and even enjoyable. Lastly, the outcomes of this study can make the syllabus developers cognizant of the importance of e-learning in learning the English language. Material developers are recommended to implement more online materials into the syllabus.

This research does have some limitations. One of these was the minimal number of participants, owing to an issue with learner accessibility. As a result, the representativeness of the respondents should be treated with caution. It is suggested that future research involves more respondents to

get more reliable findings. This research was carried out in a private language institute. Other research, including high school students, is required. This study was done in the center of the city; the rural students were included in this study. Similar topics are suggested to be worked in rural areas. In addition, it is recommended that the effects of e-learning on other skills in future research, writing, speaking, and listening, are examined. The subsequent researchers can explore the attitudes of teachers and students toward using e-learning in English classes.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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