A Comparative Study of Online Vs. Blended Learning on Vocabulary Development Among Intermediate EFL Learners

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Abstract: The current study aimed to investigate the impact of online vs. blended learning on developing vocabulary learning among Iranian intermediate EFL learners. To fulfill this, 90 Iranian intermediate EFL learners (17 to 19 years) participated and were divided into three equal groups. The control group received vocabulary instruction through the conventional methods of lecture and face to face teaching only. The online learning group and blended learning group received vocabulary instruction through LMS instructional model and blended learning instructional model, respectively. Using a before and after design, students were retested after 8 weeks. On a test of L2 vocabulary, the means revealed both online and blended learning groups outperformed the control group, moreover, no significant difference was found between online and blended learning groups. We recommend that there could be strong advantages for EFL students to devote their time to learning L2 vocabulary via online and blended learning under supportive conditions.

1. Introduction
Recent advancements in network and communication technologies have modified the way we provide training to learners in remote areas. Numerous inventive teaching approaches have produced learning solutions that address the varied demands of teachers and learners in schools and private institutions, thanks to web-enhanced networking platforms and digital media formats (Sahin-Kizil, 2014). The main issue in the implementation of emerging technology is whether or not...
teachers use innovations for the ease and effectiveness of the distribution of instructional content (Al-Hasan, 2013). Newly developed ways of integrating conventional teaching and technology-based instruction approaches have arisen in an attempt to address the varied demands of learner success and enhance their quality of learning (Hyun, 2013; Namaziandost, Homayouni et al., 2020). Many other academic reports have claimed the beneficial impact of blended learning on teaching and learning (Tomlison & Whittaker, 2013).

While researchers have already examined the differences between face-to-face teaching and online instruction formats in learning outcomes and other educational environments, few kinds of research have contrasted online and blended learning methods that explore variations in vocabulary learning. More colleges and private sector companies are embracing online or blended learning formats to offer their training courses programs. Recognizing how the suitable procurement formats vary in their usefulness for the language and enjoyment of learners has become an excellent research subject for teachers and teaching planners to help resolve the challenges of teaching and learning in both delivery formats.

Besides, electronic learning(e-learning) has changed teaching and learning techniques throughout the world. Higher education institutions are thus amending their techniques to accommodate e-learning technologies to help achieve their instructional objectives. E-learning is properly known as the deliberate utilization of technological tools such as computers, television, and the delivery of content through the use of the internet, intranet, audio, and so forth for learning (Ozkan & Koseler, 2009). Using technology is nevertheless a standard in most institutions of higher education. Examples include online learning and blended learning (BL). The present study, therefore, addresses the importance of the relative contribution of online vs. blended learning in developing vocabulary learning among Iranian intermediate EFL learners.

2. Review of literature

The Learning Management System (LMS) is the key web-based advancement to improve e-learning systems that combine in-class instruction and online education within the learning process. In educational institutions, whether in open source programming (e.g., MOODLE) or commercial (e.g., Blackboard), the learning management system is launched to encourage their course program with many kinds of resources, such as discussion boards, forums, chat, online grade uploading, online review, file sharing, task management, syllabuses, scheduling, notifications and curriculum schedules (Cole et al., 2019). Classroom practices can be expanded via the online learning management framework, linking learners to each other and their teachers; allowing the web-based exchange of study materials, library tools, and even textbooks; and combining administrative processes with learning activities. Faculty members can strengthen their teaching with efficient online resources through LMS technologies, and learners can use these instruments to enhance their interaction with instructors, classmates, and knowledge. By incorporating such technologies throughout diverse educational environments, the next generation of a workforce can be established (Klonoski, 2005). For higher education institutions, especially those with budget restrictions, the learning management system can be operated to save their costs (Sahin-Kızıl, 2014).

To boost distance learning or to augment conventional teaching approaches, various institutions may use learning management systems (Busaidi, 2012; Hyun, 2013; Sahebjamei & Moradimokhles, 2012). The main problem here is the proper use of these instruments and the exchange of knowledge by LMSs that can lead to the course’s success (Zhang et al., 2014). The execution of the LMS can be affected by multiple factors, namely the emotions of teachers and students, information technology resources, and institutional assistance (Xing et al., 2016). In determining the effectiveness, performance, or inefficacy of LMS, teachers play a vital role (AK-12 Leadership Series, 2009; Arkorful & Abaidoo, 2016; McGill et al., 2014). Research also reveals that the behavioral purpose of teachers in using LMS in their classes is closely associated with self-efficacy, technical sophistication, and a subjective standard. (Chuang et al., 2018; Turan & Akdag-Cimen, 2019).
The LMS is thus a tool that includes an e-learning platform that utilizes the internet, extranet, intranet, or other networks as a transfer tool for processing, safeguarding, and propagating learning materials, and facilitates learning and teaching-related management and communication. Furthermore, these resources help students to coordinate their instructional pace and tailor learning to their individual needs. Besides, LMS is aimed to assist teachers to transfer learning materials and monitor the progression of the learners, and also to enable students to access their e-learning lessons with educational tools.

Blended learning is a new trend in education that includes merging face-to-face (FTF) classes with computer-assisted language learning (CALL) modules (Demirer & Sahin, 2013) to provide the most productive and successful mix for particular subjects, contexts, and goals of learning (AK-12 Leadership Series, 2009). In the educational process, blended learning has become very widespread and the number of hybrid courses has grown exponentially, becoming an indispensable part of university teaching and learning between instructors and subjects (Strambi, 2004, p. 81). The kinds of the blend will range from courses that only provide web-based homework activities (e.g., Sagarra & Zapata, 2008) to courses that include a complete implementation of CALL with online activities and computational technology that supporting FTF tasks (Aborisade, 2013; Jin, 2014; Namaziandost & Çakmak, 2020; Tomlison & Whittaker, 2013).

Singh and Reed (2001) suggested six blended instruction variations for unique blended learning typology patterns: (a) offline and online learning, (b) self-paced, live and interactive learning, (c) organized and unstructured learning, (d) off-the-shelf custom materials, (e) work and learning, and (f) ingredients blending synchronous physical styles, synchronous learning, synchronous online formats, and self-paced, asynchronous formats. Reasons for the utilization of blended teaching include strengthened pedagogy, easier access to information, more learner engagement, personal appearance, cost efficiency, and simplicity of revision of learning material.

Blended training has lately been widely used by academic institutions and private organizations that have several time-and-place-related benefits (Gilbert, 2013; Namaziandost et al., 2019). The key objective of blended instruction is to address the limitations of online instruction and use diverse instructional timing and implementation methods to maximize learner satisfaction while producing higher learning results as well. Three popular definitions of blended learning are among the many definitions available: (a) a learning technique where more than one implementation mode being utilized to maximize learning results and minimize curriculum delivery costs (Mccown, 2010) (b) any mixture of instructor-led teaching approaches and technology-based learning (Golzri & Ataran, 2016), (c) a mixture of conventional and digital types of classroom instruction with creative innovations such as immersive, CD-ROM, web storage, virtual classroom, email/conference calls, and online animation/video streaming technology (McDonald, 2014).

Boelens et al. (2015) point out that, nevertheless the blended learning strategy is used as a realistic approach for interaction facilitation (Eydelman, 2013), as the face-to-face challenge brings learners together and encourages verbal and nonverbal connectivity in numerous parts of the course (Du, 2011; Namaziandost, Hosseini et al., 2020). A fundamental success factor would be the versatility, autonomy, and self-regulation of learners in blended learning (Van Laer & Elen, 2017). Self-regulation skills that are typically needed for effective involvement in blended learning courses are organization, consistency, time management, ability to use technologies to facilitate learning, and self-efficacy to exert control over learning processes (McDonald, 2014). Means et al. (2009) reported that in 100% of online classes, students performed marginally better compared to face-to-face counterparts, but substantially better in blended courses. Gemin et al. (2015) confirmed that teachers and educators in all 50 states of the United States have practiced online. Besides, as well as demand, the number of hybrid courses in higher education continues to expand (Arkorful & Abaidoo, 2016; Hashemifardnia et al., 2018).
Lee and Im (2014) indicated that the recognition in which instructional approaches and learning environments were to be used was one of the most significant problems concerning the quality of education in higher education institutions. The blended learning paradigm integrates the benefits of conventional learning with online learning, and blended learning environments integrate face-to-face learning with technology-based learning (Melton et al., 2010). In the blended learning approach, students gain information on their own, and in-person with the professor in the classroom. It is versatile since it is possible to monitor the time, location, and learning style. It includes learning in the classroom in a face-to-face way for learners and also carrying out computer activities through multimedia, utilizing computers, smartphones, programs, as well as particular tutorials and educational platforms. Besides, the structure and organization of these lessons are very crucial for learners especially in higher education courses, since any lack of cohesion and precision in the execution of an assignment frequently leads to failure in online learning.

Blended learning is thus a new educational approach that combines didactic teaching pedagogy with media-rich technology. This approach is versatile in delivering material where in addition to formal classroom instruction, tutorials, or practical classes, learners can obtain access to external learning media. In university teaching practices, particularly for education in health professions, combining e-learning materials with didactic lectures is incredibly popular, mainly due to the demonstrated learning advantages through verbal, visual, and auditory stimulations. Increased interest in self-regulatory performance, increased interaction with teachers and students both within and outside the classroom, strengthened long-term retention of information for the effective performance of cognitive learning are the most common benefits.

This research aims to study the effect of online learning vs. blended learning in developing vocabulary learning among intermediate EFL learners. The participants in this research are native Persian speakers who are studying English as a foreign language. Considering that vocabulary teaching curricula should use the most productive approaches for teaching eligible prospective students, understanding whether teaching time is best spent on blended learning or online learning is important as part of improving the vocabulary growth of future students. The results of the present study may pave the way for the students’ training programs in training qualified future students. To this end, the following research question was asked concretely:

RQ. Is there any significant difference between Iranian EFL learners’ vocabulary development through online learning and blended learning?

Based on the abovementioned question, the following null hypothesis was formulated in this study:

H0. There is not any significant difference between Iranian EFL learners’ vocabulary development through online learning and blended learning.

3. Method

3.1. Participants

The sample of the current research was 90 intermediate EFL learners at a private English language institute. Using systematic random sampling, the participants were assigned to three groups of 30 students (each group included 15 female and 15 female students). The age range of the participants was between 17–19 years old. The participants’ first language was Persian, and they have been studying English as a foreign language for at least five years. Their level of English language proficiency was determined based on their scores on the Oxford Quick Placement Test (OQPT). It is worth mentioning that the participants’ satisfaction was considered as they filled out the consent letter form.
3.2. Instruments

The OQPT is the first instrument that was used to homogenize the participants in the current study. It allowed the researcher to get a better sense of what stage her subjects were at (i.e. elementary, pre-intermediate, intermediate). The students whose scores ranged from 35 to 47 (out of 60) were regarded as intermediate learners, as per this test.

A researcher-made pre-test of vocabulary (Appendix A) was the second instrument for collecting data to address the question posed in the present analysis, which was constructed based on the coursebook of the learners (Family and Friends 2). 60 multiple-choice items were included in this test. For the test to be both valid and reliable, a similar group other than the experimental and control groups was piloted. This pilot targeted at pacing the test and evaluating the complexity of the item and the discrimination of the item, as well as measuring the reliability of the tests. A duration of 50 minutes was calculated to provide enough time for the students to take the exam. The researcher put up the time is taken by the quickest student and the time taken by the slowest student. Then the average was determined to get the students’ real-time necessary to accomplish the exams. This time has been assessed in this way: The time taken by the quickest student + the time taken by the slowest student.

Reliability is the degree to which a test yields stable outcomes when conducted under identical circumstances, according to Hatch and Farhady (1982). Consistency of outcomes is also the underlying principle of a test’s reliability. To assess the reliability of the vocabulary pre-test, it was administered to one pilot group. Similar to experimental and control classes, the vocabulary test was piloted on 24 intermediate students. The Kuder-Richardson Coefficient of Reliability (K-R 21 Formula) was used to measure the reliability of the test which was 0.89. moreover, a panel of English experts validated the test; they asserted that as the test measured what it was intended to measure, it can be concluded that the test is valid.

The third tool used in this research was the post-test of vocabulary. The altered version of the pre-test was used as the post-test. All post-test properties were the same in terms of form and number of items as the pre-test specifications. The only difference between this test and the pre-test was that there was a variation in the sequence of questions and options to prevent the possible retrieval of the responses to the pre-test. It was conducted to assist the researcher in assessing the impact of the treatment on the vocabulary knowledge of the students. As the post-test was similar to the pre-test, it was regarded both valid and reliable but to assure, the researcher calculated the reliability through K-R 21 Formula as (r =.916) and the validity was confirmed by those who validated the pretest.

3.3. Procedures

In the first step, 90 Iranian intermediate EFL learners from private English language institutes were selected by administering an OQPT. Then, they were divided into two equal experimental groups— an online learning group (OLG) and a blended learning group (BLG) — and one control group (CG). A researcher-made vocabulary test pre-tested them. Then with the three classes, the training program began. Via the regular curriculum, which was traditional approaches (lecture and face to face training, the control group obtained vocabulary training from the teacher. The instructor stands between the students and the knowledge inside the control group. When they come to class, students have no (or little) understanding of the subject. They are taught all the facts in class, and it is always the fundamental knowledge about a subject (Al-Hasan, 2013). Students at home need to do more detailed knowledge, called homework. The researcher taught 10 words in each session; first, she translated all the words into Persian, and also, she provided some synonyms and antonyms for the words. Then, she required the students to read the words and focus on their meanings and spellings. After that, the researcher taught an English text which contained the mentioned words. Finally, the researcher required all the students to rewrite the words and their meanings at home as their homework.

The first experimental group (online group) received vocabulary instruction by the instructor with the LMS. The authentic materials were selected for rehearsal by the participants. There was
a location arranged so that participants could exchange their opinions and resolve the problems. For the first experimental group, before the experiment began, the teacher explained to the students the challenges of LMS. For the participants, the teacher explained how to use the LMS, how to take the materials electronically, and how to reach the instructor online for particular training sessions. This was aims to guarantee that all online group participants had no trouble using the LMS instructional format in the experiment so that they can fulfill the general English duties and online tasks for the remainder of the educational plan (Busaidi, 2012). The instructor created a dilemma or question about a certain subject in the online class and paired her students. She gave sufficient time to each pair of learners so that they could draw a correct conclusion and encourage students to express their conclusion in their speech. This was how her students were involved, communicated, and remembered more than ever before about the class. The same as the control group, 10 words were taught to this group in each online session. First, all the words were sent to the students and they were asked to provide their meanings by themselves. The students found the meanings, the synonyms, and the antonyms of the words and shared them in the online group. Then, the researcher sent pictures of each word in the group to make the word learning more attractive for the students. The text which was contained the target words were also sent to this group to help the students learn the words in the related sentences. The second experimental group (Blended Learning (BL) group) received the same vocabulary English instruction by the instructor with the blended learning model. Every educational session, the blended learning group received English vocabulary training by the instructor for 40 min. The instructor taught 10 words in each session for 40 min in a face to face situation. The words were translated for the students; their synonyms and antonyms were provided for this group; and also, the text was taught. The rest of the time (e.g., 20 min every session), the picture of each word was sent to this group and they worked online in doing tasks and exercises. If they required some guidance, the teacher was there to support them online. The participants were in a smart school, and they could all have interaction with each other and even with the teacher using computers. The same trainer (the present author) directed and taught the educational program for the three groups.

All learners took the vocabulary post-test at the end of the study. Since both pretest and posttest were objective questions (multiple-choice questions), the rating was done through the answer sheet objectively. The range of the scores for the pretest and posttest was between 0 and 30 (each item received 0.5 points).

3.4. Data analysis

After collecting sufficient data, they were analyzed based on the objectives of the study. In order to check the quality of data normality, Kolmogorov-Smirnov (K-S) test was used. After that, statistical tools like paired samples t-test and One Way ANOVA were used to determine the impact of the treatment on the participants’ receptive skills enhancement.

4. Results

It was important to verify the normality of the distributions before doing any analyses on the pretest and posttest. Therefore, the Kolmogorov-Smirnov normality test was conducted based on the data collected from the aforementioned tests. The results are shown in Table 1:

The p values under the Sig. the column in Table 1 determine whether the distributions were normal or not. Since all the p values in Table 1 were larger than .05, it could be concluded that the distributions of scores for the pretest and posttest obtained from BLG, OLG, and CG learners had been normal. It is thus safe to proceed with the parametric test (i.e. one-way ANOVA) and make further comparisons between the participating groups.

It might be recalled that it was stated before that there were 60 intermediate EFL learners in the two experimental groups and 30 learners in the control group. To make sure about the
homogeneity of these 3 groups in terms of their vocabulary learning before the treatment their pretest scores were compared through a one-way between-groups ANOVA:

Table 2 shows the mean scores of the learners in the BLG ($M = 15.11$), OLG ($M = 14.98$), and CG ($M = 15.61$). To find out whether the differences among these three mean scores were statistically significant or not, the researcher had to examine the $p$-value under the *Sig. the* column in the ANOVA table.

Based on the information presented in Table 3, there was not a statistically significant difference in the pretest scores for the BLG ($M = 15.11$, $SD = 1.84$), OLG ($M = 14.98$, $SD = 1.88$), and CG ($M = 15.61$, $SD = 2.39$), $F(2) = .79$, $p = .456$ (two-tailed). This conclusion was made since the $p$-value was larger than the significance level ($p > .05$). Hence, it could be inferred that the learners in the two groups of experimental and one control group, were at the same level of vocabulary learning before treatment.

The reason behind administering the posttest was to see whether there was a difference in vocabulary learning of the learners in the experimental groups and those in the control group. To this end, the posttest vocabulary scores of the BLG, OLG, and CG needed to be compared via one-way between-groups ANOVA. This section, thus, presents the results of one-way ANOVA used to compare the posttest scores of the BLG, OLG, and CG. The descriptive results of the comparison of the three groups on the posttest are displayed in Tables 4 and 5.

The mean scores of the BLG ($M = 17.68$), OLG ($M = 16.91$), and CG ($M = 15.41$) were different from one another on the posttest. To figure out whether the differences among these mean scores were significant or not, one needs to check the $p$-value under the *Sig. the* column in the ANOVA table below (Table 5).

### Table 1. Normality test for the scores of the pretest and Post-test

|                           | Statistic | df | Sig.  |
|---------------------------|-----------|----|-------|
| Blended Learning Group. Pretest | .17       | 30 | .064  |
| Blended Learning Group. Posttest | .15       | 30 | .080  |
| Online Learning Group. Pretest   | .13       | 30 | .158  |
| Online Learning Group. Posttest   | .20       | 30 | .072  |
| Control Group. Pretest         | .27       | 30 | .121  |
| Control Group. Posttest        | .22       | 30 | .089  |

### Table 2. Descriptive statistics for the pretest

| Groups | N   | Mean | Std. Deviation | Std. Error |
|--------|-----|------|----------------|------------|
| BLG    | 30  | 15.11| 1.84           | .33        |
| OLG    | 30  | 14.98| 1.88           | .34        |
| CG     | 30  | 15.61| 2.39           | .43        |
| Total  | 90  | 15.23| 2.05           | .21        |
As could be observed in Table 5, there was a statistically significant difference in the posttest scores for BLG ($M = 17.68, SD = 1.17$), OLG ($M = 16.91, SD = 1.54$), and CG ($M = 15.41, SD = 2.00$) on the posttest of vocabulary since the p-value under the Sig. column was found to be less than the specified level of significance (i.e. $0.000 < 0.05$), meaning that the three groups significantly differed in terms of vocabulary learning after the treatment. This result could also be noticed in the bar chart that follows (Figure 1).

As seen in Figure 1, BLG learners were able to attain higher scores than OLG learners, who in turn were able to receive higher scores than CG learners. Pair-wise group comparisons (in Table 5) indicate that the two groups on the delayed post-test were slightly different.

![Figure 1. The mean scores of BLG, OLG, and CG on the post.](attachment://figure1.png)
Based on Table 6, it could be seen that the difference between BLG (M = 17.68) and CG (M = 15.41) was statistically significant since the Sig. value corresponding to this comparison (p = .001) was less than .05. This means that using blended learning could lead to a significant effect on developing vocabulary learning.

Likewise, CG learners’ mean score CG (M = 15.41) was significantly lower than that of OLG learners (M = 16.91) because the p-value related to this comparison was .002, which is lower than the significance level. As a result, it could be inferred that online learning also led to a significant effect on developing vocabulary learning.

Finally, the comparison of BLG (M = 17.68) and OLG (M = 16.91) revealed that the two types of blended learning and online learning employed for teaching vocabulary to EFL learners were effective; although the BLG performed a little better than the OLG, the difference was not statistically significant since the p-value corresponding to the comparison of these two experimental groups (i.e. .190) exceeded the significance level.

5. Discussion and conclusion
After analyzing the data, it was revealed that the two online learning and blended learning positively affected the students’ vocabulary learning. Moreover, it was indicated that blended learning yields significantly better vocabulary learning than allocating the same amount of time to vocabulary instruction through online learning. The findings of this study are consistent with some previous studies into blended learning and learning management system (Van Laer & Elen, 2017; Zhang et al., 2013, 2014) who confirmed the positive effect of online and blended learning (BL) in overcoming and learning various skills and sub-skills which, in turn, led to educational success.

The reason for this apparent better performance of both online and blended learning groups is that students require technology incorporation and regard it as an important part of their learning experience because it helps them to learn enjoyably and engagingly. Students require technology incorporation and regard it as an important part of their learning experience because it helps them to learn enjoyably and engagingly, the explanation for this apparent improved success in both online and mixed learning classes. This in part, is in line with Sahin-Kizil (2014) and Hyun (2013) who suggested that blended content helped to make the activities of the course engaging, supportive, inspiring, and attract the attention of students. This also goes with the findings of the AK-12 Leadership Series (2009), which claimed that today’s native digital learners require technology to be used in their learning experience because it is an integral part of their lives. Besides, the online and blended content provides students the chance to learn at their rate, reflecting Tomlison and Whittaker (2013) who mentioned that students can learn at any speed when they want to. Also, this correlates with Aborisade (2013) who points out that blended

| (I) Groups | (J) Groups | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |
|-----------|------------|-----------------------|------------|------|------------------------|
| BLG       | OLG        | -.76                  | .41        | .190 | -.27 -1.80             |
|           | CG         | 2.26                  | .41        | .000 | 1.22 -3.30             |
| OLG       | BLG        | -.76                  | .41        | .190 | -1.80 -.27             |
|           | CG         | 1.50*                 | .41        | .002 | .46 2.53               |
| CG        | BLG        | -2.26*                | .41        | .000 | -3.30 -1.22            |
|           | OLG        | -1.50*                | .41        | .002 | -2.53 -.46             |
learning creates a potential for accelerated learning for gifted and talented students and improve individual learning skills through a personalized learning environment and simultaneously it provides greater help for the less skilled and involves students who do not react well to conventional classroom learning.

It is apparent that the experimental group benefited from the blended materials because it surpasses the other group who only experienced conventional classroom training. The explanation is that blended content inspires students to learn and so many of them become involved, and this goes with Jin (2014), who found that students who use a mobile app in blended learning were successful in learning the grammar skills and their engagement in learning activities were greatly increased. Besides, the use of blended learning reduces the issue of time shortages in the classroom to practice and perform more activities about what students learn, as it provides them the opportunity to concentrate on what they have learned and work more on the challenges in which they still have problems. This coincides with Gilbert (2013) who claimed that a blended model provides help for face-to-face teachers while creating versatile platforms for the learners’ reflection of what they have learned. Another consideration worth mentioning is that blended learning content enables learners to preserve data while it provides them with new material for instruction. This argument is compatible with Melton et al. (2010), who showed that the blended content displayed on WEBGRAM made it possible for learners to navigate additional activities to check the pre-learned grammatical structures. It also allowed them to revise the structures by themselves constantly.

According to Van Laer and Elen (2017), the use of instructional methods in blended learning will ensure that learners are not deemed just passive audiences but active participants in the learning process. Considering that one of the most fundamental language strategies is practice and repetition, multimedia use, such as network blended learning, paves the way for this activity. The students can become proficient in pronouncing the words accurately by clicking on them and iterating them multiple times through software if it is required while this is impossible to be carried out in the ordinary educational plan of teaching English as a foreign language (Yenkimaleki & van Heuven, 2019). Klonoski (2005) reported that higher education is seeking to identify cost-effective ways of integrating curriculum technologies of the next decade into its learning activities. When technology is becoming increasingly popular in the schools, it takes its place alongside the lights and heat as an integrated infrastructure feature and is a requirement or a necessary running cost (Klonoski, 2005).

For versatility (Melton et al., 2010; Ocak, 2011), independence of time constraints (Ocak, 2011), instructional efficacy, and cost-effectiveness (Eydelman, 2013), the blended learning benefits have been mentioned. Since several problems in all education are how to improve the autonomy of students as learners and how to optimize their self-direction (Garrison & Vaughan, 2008; Güzer & Caner, 2014), blended learning would be a perfect solution to solve this problem. Research shows that blended learning enhances the autonomy of learners (Eydelman, 2013) and facilitates sustainable learning (Güzer & Caner, 2014). The teachers should carefully consider the educational consequences and develop fresh instructional designs. This includes the following: (1) a clear awareness of pedagogical methods unique to the topic and age of students (also called knowledge of pedagogical content); (2) adequate use of full-class, small group, and cooperative learning; (3) meaningful integration of teaching and learning materials; (4) regular opportunity for students to respond to and build on questions; (5) valuable local words and languages; (6) diverse lesson activities; and (7) a constructive mindset towards students and their desire to learn (Eydelman, 2013; Mccown, 2010; Sagarra & Zapata, 2008).

In summary, this study checked the effect of online learning vs. blended learning in enhancing vocabulary by Iranian EFL students. The findings revealed that both blended and online learning had a significant positive impact on EFL learners’ vocabulary development. Furthermore, the results also revealed that blended learning improves the vocabulary learning of EFL learners a bit more than that of online learning. The findings revealed that the suggested blended learning
approach, as well as online learning, increased the vocabulary achievement of the students. Not only were students pleased with the innovative blended learning approach of teaching vocabulary and preferred it to conventional classroom-based learning, because of their high enthusiasm, but they also started to invest time researching new vocabulary items outside the classroom.

It is proposed that a smart instructional decision would be to assign preference to blended learning and practice of English vocabulary in educational environments where only minimal curricular time is accessible for teachers in teaching and practice. But this should not mean that the growth of English language skills can be neglected by online learning. The findings showed a commitment to the production of vocabulary through learning management. In certain instructional contexts, online learning platforms have trouble delivering sufficient, reliable input to learners. Online learning has demonstrated an inability to have a reliable and automated diagnosis of certain educational issues in some circumstances. In addition, some teachers are unable to make successful use of online learning because they have not been equipped in their academic activities to use technology.

The pedagogical implications of the present study could be applied to Iranian EFL students in language institutions and EFL and universities in teaching next future EFL learners. The outcomes can have consequences for curriculum creators, training software developers for prospective EFL learners, EFL training content manufacturers, and all interested in EFL education. For EFL teachers, this research is important because it sheds light on the importance of blended learning on the vocabulary learning of EFL students so that teachers continue to shift towards incorporating technology into education. They will also move into shifting their position as guides for knowledge not providers of it from teachers to facilitators. In able to commence thinking about incorporating technological tools into the curriculum, this research may also be useful for curriculum designers in the Iranian Ministry of Education. Besides, it ensures the creators of teacher training programs, as it provides them with an ability to progress English language teacher training programs to incorporate technology into their classrooms. Also, this study could enable the Iranian Ministry of Education to provide computer labs and an internet connection to all schools to improve technology learning. It is, however, recommended to explore the feasibility of blended learning vs. online learning in teaching other subjects. In addition, since the subjects of this research were EFL students, the study could be expanded to explore these problems in other students.

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Appendix A. (Vocabulary Test)

1. I like Manchester team. It is my .................team.
   a. good
   b. excellent
   c. perfect
   d. favorite

2. I put out my coat since the weather was ..............
   a. rainy
   b. sunny
   c. windy
   d. cold

3. He can ................. on the card.
   a. speak
   b. write
   c. read
   d. write

4. My little brother has straight hair. His hair is not .................
   a. long
   b. short
   c. curly
   d. dry

5. Millions of different plants and animals live in tropical .................
   a. buildings
   b. homes
   c. rainforests
   d. parks
6. Plants and trees like sunlight and rain, so they .......... fast.
   a. die
   b. grow
   c. develop
   d. decrease

7. Monkeys ............ from tree to tree.
   a. jump
   b. fly
   c. run
   d. walk

8 ............... study dinosaur bones to find out how they lives and what they liked like.
   a. teachers
   b. students
   c. practitioners
   d. scientists

9. Usain Bolt is a runner and won three gold ............... at the Olympics.
   a. medals
   b. books
   c. shoes
   d. balls

10. This African language has a few ........ .....
    a. information
    b. speakers
    c. dictionary
    d. news

11. It is really hard to understand Chinese. “Hard” is closest in meaning to: ........ .....
    a. lucky
    b. difficult
    c. real
    d. amazing

12. The number of endangered languages is largely increasing. “Largely” is closest in meaning to: ......... .....
    a. nearly
    b. really
    c. greatly
    d. probably

13. We collect food and ........ .... clothing for poor people.
    a. next
    b. probable
    c. extra
    d. honest
14. I always wish to have a ........ of cake with my coffee.
   a. bar
   b. slice
   c. tube
   d. loaf

15. Education and training are the most effective ........ of improving the nation's economy.
   a. cultures
   b. means
   c. institutes
   d. skills

16. As I ........ earlier, sales this year have been lower than expected.
   a. existed
   b. mentioned
   c. increased
   d. respected

17. The laws suggest that relationships between members of ........ are organized in terms of rules.
   a. destination
   b. society
   c. culture
   d. knowledge

18. They began .......... the area carefully, taking in every detail and watching for the slightest movement.
   a. measuring
   b. predicting
   c. scanning
   d. destroying

19. She said the letter had caused her .......... hurt and distress at a very difficult time.
   a. additional
   b. favorite
   c. cultural
   d. popular

20. Sometimes you have to remind yourself that most of your problems only .......... in your head.
   a. invite
   b. interest
   c. exist
   d. disappear

21. This African language has a few .......... ....
   a. information
   b. speakers
22. It is really hard to understand Chinese. “Hard” is closest in meaning to: …… ……
   a. lucky
   b. difficult
   c. real
   d. amazing

23. The number of endangered languages is largely increasing. “Largely” is closest in meaning to …… ……
   a. nearly
   b. really
   c. greatly
   d. probably

24. We collect food and …… …… …… clothing for poor people.
   a. next
   b. probable
   c. extra
   d. honest

25. I always wish to have a ……… of cake with my coffee.
   a. bar
   b. slice
   c. tube
   d. loaf

26. I have been to Sydney … …… times; three times in 1987 and twice last year.
   a. many
   b. few
   c. a few
   d. a little

27. Sound travels 4.5–5 times faster through water than through the air. For this reason dolphins rely on sound for ……… more than any other mode.
   a. disappearance
   b. experience
   c. travel
   d. communication

28. If you want me to help you, you have to be more … about what kind of book you’re looking for.
   a. simple
   b. experienced
   c. lucky
   d. specific

29. Sometimes you have to remind yourself that most of your problems only … in your head.
   a. invite
30. They publish educational books just for students in a high school age . . .
   a. value
   b. exercise
   c. range
   d. wonder

31. Although Robin was an English teacher in Ohio, he could speak Chinese the same as a . . . . . . . . speaker.
   a. amazing
   b. native
   c. valuable
   d. specific

32. . . . . . . . . scientists can also play an important role in improving energy efficiency in their laboratories.
   a. Nowadays
   b. Wrongly
   c. Rudely
   d. Strongly

33. The use of energy and fuel rises as the countries and . . . . . . . . become more industrialized.
   a. cultures
   b. nations
   c. communications
   d. institutes

34. This instrument can . . . . . . . . the amount of gases responsible for ozone layer destruction.
   a. explain
   b. develop
   c. measure
   d. donate

35. Education and training are the most effective . . . . . . . . of improving the nation's economy.
   a. cultures
   b. means
   c. institutes
   d. skills

36. Unfortunately, the author's . . . . . . . . of the subject is not matched by available facts.
   a. attention
   b. object
   c. interview
d. knowledge

37. The city, which depends on . . . . . . trade, has been hit hard by global economic difficulties.
   a. international
   b. interesting
   c. popular
   d. probable

38. Because of the . . . . . . . in street crime, my old grandpa is afraid to leave his home.
   a. order
   b. confidence
   c. increase
   d. culture

39. Are you seriously suggesting that she should . . . . . . her job in order to look after her husband?
   a. give up
   b. depend on
   c. make up
   d. check in

40. Her friend's house took a direct hit by the earthquake, but . . . . . . . the family were out.
   a. bravely
   b. fortunately
   c. honestly
   d. mostly

41. Although she is an educated person, she is only . . . . . . with the Internet at an elementary level.
   a. similar
   b. favorite
   c. popular
   d. familiar

42. The students were totally confused, so they asked the teacher to . . . . . . the problem once more.
   a. explain
   b. prepare
   c. compare
   d. experiment

43. In all . . . . . . , there are children who join their parents to work in industries and in fields to earn money.
   a. respects
   b. lifespans
   c. cultures
   d. planets

44. She's just got a . . . . . . . . . . . -time job; she works three hours a day.
a. half
b. part
c. full
d. total

45. You always get …………. …………. …………. traffic during the rush hour.
   a. difficult
   b. hard
   c. heavy
   d. strong

46. I've already received a few cards from those that have …………. e-mail addresses with me.
   a. sought
   b. explained
   c. respected
   d. exchanged

47. I took his pen …………. …………. …………. mistake.
   a. on
   b. for
   c. by
   d. in

48. I had to go to the shops to pick …………. …………. …………. my photos.
   a. for
   b. up
   c. out
   d. away

49. You’re the only person who could …………. from the burning building.
   a. exchange
   b. escape
   c. improve
   d. access

50. The committee warned all the nations to reduce the …………. of carbon dioxide released into the air.
   a. value
   b. amount
   c. region
   d. existence

51. Nowadays, what is so important is a more flexible health insurance system to …………. the needs of the modern world.
   a. make
   b. take
52. There was still a lot of snow on the ground when I arrived.
   a. on
   b. at
   c. in
   d. of

53. Generally, rainfall is highly variable, and the start and end of two rainy seasons are unreliable.
   a. valuable
   b. variable
   c. appropriate
   d. available

54. People yawn when they’re tired or bored.
   a. smile
   b. yawn
   c. nod
   d. breathe

55. He was very jealous when his best friend went out with the girl he really liked.
   a. embarrassed
   b. proud
   c. jealous
   d. happy

56. The batteries have run out so now I can’t listen to my walkman.
   a. stopped
   b. missed out
   c. broken
   d. run out

57. It will be even important for a school to have good communications with parents and the local community.
   a. languages
   b. patterns
   c. communications
   d. objects

58. Recent researches show that methods of treatment vary according to the age and general health of the patient.
   a. vary
   b. quit
   c. measure
   d. exchange

59. The money you borrow from a bank is called a(n)
60. If you get a place at university the ………. ………. ………. ………. is free.
   a. grant
   b. degree
   c. tuition
   d. term