The Impact of Blended Online Learning on Iranian EFL Learners' Vocabulary Achievement

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Abstract

The influence of computer and Internet on education paved the way for new and innovative methods of language teaching. Blended online learning is one such method that is known by integration of Internet into traditional techniques and strategies of learning. The present study was designed in order to determine the effect of blended on-line and face-to-face instruction on Iranian EFL learners’ vocabulary achievement. Prior to the main study, the materials of the study were pilot studied on twenty learners of similar age, sex, and proficiency in order to protect their reliability. The participants of the main study (n = 60) were selected based on their performance on Oxford Placement Test (OPT). Then, a pre-test was administered to identify participants' current knowledge of lexical items. They were then assigned to two groups of experimental (n = 30) and control (n = 30). The participants of experimental group received 20-session vocabulary instruction in blended on-line environment taking advantage of Nicenet platform while the participants of control group learned vocabulary items through traditional techniques. Finally, all learners of study were given a vocabulary knowledge test as post-test. The result of t-test between pre-test and post-test showed that there is a significant difference between experimental and control group regarding their vocabulary knowledge. The experimental group outperformed the control group. The result of this study may help EFL teachers and syllabus designers to gain insights for the enhancement of EFL learners' vocabulary knowledge.

*Index Terms—Vocabulary - Computer Assisted Language Learning - online learning – blended online instruction*
I. INTRODUCTION

Research on second language vocabulary acquisition as a separate area of study initiated in 1980s and subsequently it has been developed by increasing number of investigations in the recent decades. Most of the learners, teachers, and researchers believe that knowledge of L2 vocabulary plays a significant role in language learning (Nation, 1982; Zimmerman, 1997; Laufer & Shumeli, 1997; De Bot, Paribakht & Wesche, 1997).

On the other hand, computers have provided opportunities for growth and development. The use of computer in educational settings has motivated researchers to investigate its effectiveness and find appropriate ways to improve language instruction (Al-Jarf, 2007). In second and foreign language learning and teaching, the use of computer technology challenged the traditional methods and approaches and introduced new tools, approaches and strategies in language learning and teaching. It was led to the emergence of sub-discipline in English language learning called Computer Assisted Language Learning (CALL).

There has been an increasing growth for the ideas that computer technologies can support learning. Many features of the computer and computer-based systems (such as text, audio, video, graphics, animation, and so on) are considered to enhance vocabulary development and reading comprehension (Constantinescu, 2007).

Regarding the significance of vocabulary in language learning, learners need to use effective and attractive ways rather than boring ways to learn vocabulary. When technology-based methodologies were entered into education, attention was paid to studies that investigated the role of computer in language learning. Earlier studies on vocabulary acquisition and Computer Assisted Language Learning (CALL) have focused on the effects of multimedia glosses, and the same for reading comprehension, since vocabulary and reading are closely and reciprocally related (Constantinescu, 2007). A brief overview of online learning is provided in the following section.

II. BACKGROUND

Technology especially the computers and some related software's received particular attention in language learning in general, and vocabulary instruction in particular. Computer-
assisted language learning or CALL refers to use computer technology for language learning or acquisition. This technology may include computer-assisted language learning, mobile-assisted language learning, as well as ubiquitous-assisted language learning (Warschauer & Healey, 1998).

It is supposed that computer technologies may improve and facilitate language learning especially in terms of vocabulary learning as well as reading comprehension. According to Chapelle (2001), the first seeds of CALL were planted during 1950s. In effect, CALL was considered as an instructional aid instrument during the 1960s. In the 1960s and 1970s, the application of CALL in second language contexts were considered; and CALL firstly applied in small scale personal projects which was called Computer Applications in Second Language Acquisition (CASLA) (Chapelle, 2001). Svenconis and Kerst (1994) explained that “until the mid-1980s, most of the software produced for computer assisted language learning (CALL) or computer assisted language instruction (CALI) was of drill and practice type” (p. 34). It means that the first application of technology's aid in language learning was considered in terms of exercises and practices. Gradually, the application of technology in facilitating language learning becomes more complicated and sophisticated.

Currently there are different tools as online dictionaries which provide a variety of information about words, including synonyms, collocations, and sentences along with examples in which the applications of the word in the context have been presented. Concordancing as a language learning resource firstly used in the 1980s “when computational power began to get scaled into small, affordable personal computers that have since appeared on teachers’ desks” (Stevens, 1995, p. 2). In addition, Flowerdew (1996) considered the concordancer as a piece of software that can be applied in order to recognize “objective data on both grammatical and lexical usage” (p. 92).

Chia and Ellis (2003) argued that internet is an effective instrument for getting access to authentic news that seems to be crucial in enhancing students' skills. Murday, Ushida, and Chenoweth (2008), in their study, upheld that Language Learning Technology (LLT) is beneficial in improving listening skill. Lee's (2005) investigation also showed the influence of LLT on the writing skill, positively. Furthermore, in his further investigation, proved the positive influences of LLT on speaking and reading skills, too. LLT proved to encourage
students to use the skills learnt in other learning contexts and courses. It seems that the students, based on Lee (2005), had a positive perspective towards LLT and view LLT as skill even for the future.

Fahim, Motallebzadeh and Sazegar (2011) made an investigation in which the effect of e-mailing on vocabulary retention of Iranian EFL learners has been investigated. Their study made a comparison between paper-based and email-based presentation of vocabulary in terms of vocabulary retention. They revealed that using e-mail technology may enhance vocabulary retention.

All in all, it seems that LLT is a turning point in the history of language teaching and learning.

III. STATEMENT OF THE PROBLEM

Although different studies confirmed the positive effects of blended instruction on second language learning, "there is a lack of research to examine what learner and instructional variables within blended learning environment individually or collectively influence student learning especially in academic settings" (Lim & Morris, 2009, p. 283).

Some boring and traditional vocabulary teaching and learning strategies such as memorizing or motivating learners to memorize long lists of words are used by Iranian EFL learners in order to have a good performance on general English language tests. This is one of the challenging problems of Iranian EFL learners that in some cases make them disappointed in their attempt to learn language. Also, lack of innovative and updated strategies for vocabulary learning and placing all vocabulary learning responsibilities on learners' shoulders created some negative attitudes towards the current vocabulary teaching methodologies. In addition, the majority of EFL learners complain that their lexical knowledge is transient, since there is no opportunity to practice their knowledge out of class time.

Therefore, regarding all problems mentioned above, the need for a study to address these problems and provide some suggestions and implications to solve them is indispensable.
IV. RESEARCH QUESTION

The major objective of this study is to determine whether the blended online vocabulary instruction has any impact on intermediate EFL learners' vocabulary achievement. In order to pursue the purposes of the present study, the following research question was posed:

*Does the application of blended online instruction have any significant effect on Iranian intermediate EFL learners' vocabulary achievement?*

V. RESEARCH HYPOTHESIS

The following hypothesis is formulated to be tested in the study:

*The application of blended online instruction does not have any significant effect on intermediate EFL learners' vocabulary achievement.*

VI. METHOD

A. Participants

The participants of the study were 60 female adult EFL learners with intermediate level of English language proficiency located in the city of Isfahan. Their experience in English language learning was different. Their age range was between 19 and 27. The participants' native language was Persian. They were selected for this study based on their performance on Oxford Placement Test (OPT) that was administered at the beginning of the study. They were assigned to two groups in order to pursue the goals of the study.

B. Materials

The materials employed for data collection consisted of OPT, pre and post-test, Nicenet platform, and Computer Literacy Questionnaire

The detailed description of materials is as follows:
1. Oxford placement test

In order to manifest the participants’ homogeneity in terms of language proficiency level, a version of Oxford Placement Test called Solutions Placement Test (Edwards, 2007) was used in this study. The validity of the test is self-evident. Oxford placement test has been used after consultation with teachers and it was administered to assess students’ knowledge of grammar, vocabulary and reading. It also enabled the researcher to have a greater understanding of what level their participants were at. The test contained 50 multiple choice questions assessing students’ knowledge of key grammar and vocabulary from elementary to intermediate levels, and a reading text with 10 graded comprehension questions (five true-false and five multiple choice items). Four participants (out of 64) could not attain the determined scores for intermediate level and consequently they were excluded from study.

2. Pretest and Posttest

A vocabulary achievement test functioning as pretest was designed in order to determine the prior lexical knowledge of the participants. The test items were selected from intermediate level of Test Your Vocabulary II book by Watcyn-Jones (2000). The test composed of 40 multiple-choice items selected from different parts of the book. The similar version of this test with different item arrangement as well as option arrangement functioning as post-test was used after implementing the treatments of the study in order to detect the lexical achievement of the participants. In order to determine the reliability of the tests, It was pilot studied on the L2 learners (n = 20) who were similar to the learners of the main study in terms of age, sex, and proficiency level. The results of Cronbach's alpha analysis showed that the test was reliable (r = 0.82). The content validity of the test was evaluated by three experts who are PhD holders of applied linguistics with more than five years of teaching and testing experience.

3. Nicenet Platform

Nicenet is a free internet service that was designed to help teachers and learners to interact. Nicenet is a virtual classroom that both teacher and students can share their learning needs or anything that is not possible through normal class time. The administrator page includes the
following features: conferencing, scheduling, document sharing, personal messaging, link sharing.

4. Computer Literacy Questionnaire

This questionnaire was already used by Stricker and Wilder (2001) in order to investigate the current knowledge and skills of the participants on the use of computer. It composed of two parts; part one with 12 and part two with 6 items. In part one, there are six statements that measure the participants' interest toward working with computer and six negative statements that measure the extent of the participants negative attitudes toward using computer. Each item had three options: true, not true and do not know. Part two consisted of six items asking about the frequency of the use of computer by the participants. Each item had four options of never, once a week or less, more than once a week, and do not know.

VII. Data Analysis

In order to answer the research question of the study, the means of participants on pre-test and post-test of the study were compared. The descriptive statistics of control and experimental group's performance on pre-test is provided in Table 1.

<table>
<thead>
<tr>
<th>TABLE 1. DESCRIPTIVE STATISTICS OF PRETEST</th>
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<tr>
<td>Pretest (Control Group)</td>
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<tr>
<td>Mean</td>
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<td>Std. Deviation</td>
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<td>Maximum</td>
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<tr>
<td>Pretest (Experimental Group)</td>
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<td>Mean</td>
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<td>Std. Deviation</td>
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The means of control and experimental groups on pre-test were not different from each other. In order to see if there is no significant difference between the control and experimental groups regarding their knowledge of vocabulary, an independent sample t-test was performed.

| TABLE 2. |
The results, as Table 2 shows, indicated that there is no statistical significant difference between experimental and control group \((t_{2, 58} = 0.93, p > 0.01)\) in their performance on pretest. Thus, at the beginning of study, the two groups were similar in terms of vocabulary knowledge.

The experimental group \((n = 30)\) answered the computer literacy questionnaire before receiving the formal online instruction. It was intended to measure the participants’ knowledge of computer. The results showed that 86.1% participants have positive attitude toward computer and they like to use it. Also, 82.21% of participants believed that negative statements toward using computer are not true about themselves. With regard to the use of computer for fulfilling different affairs, 43.9% of participants used computer more than once week. The point is that, they were not using computer for doing more specialized jobs such as making excel and power-point files. This is why 29.43% of them chose never option.

At the end of study, a similar version of pre-test was administered as a post-test of the study. The arrangement of items and choices were changed in order to avoid the practice effect of the test. The results of their performance were illustrated by descriptive statistics of Table 3.

The results showed that the means of experimental and control group were different. In order to find whether there is a significant difference between the control and experimental group

<table>
<thead>
<tr>
<th>Groups</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
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<tbody>
<tr>
<td>Posttest (Control Group)</td>
<td>29.43</td>
<td>2.81</td>
<td>24.00</td>
<td>40.00</td>
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<td></td>
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<tr>
<td>Posttest (Experimental Group)</td>
<td>33.40</td>
<td>3.02</td>
<td>26.00</td>
<td>39.00</td>
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</table>
in their performance on post-test, an independent sample t-test was performed. The results, as Table 4 shows, indicated that there is a statistical significant difference between experimental and control group ($t_{2,58} = 5.26, p < 0.01$) in their performance on post-test.

<table>
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<th>TABLE 4.</th>
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<tr>
<td>INDEPENDENT SAMPLE T-TEST OF THE EXPERIMENTAL AND CONTROL GROUPS ON POSTTEST</td>
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<td>5.26</td>
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In order to determine the participants’ vocabulary knowledge and to find whether there was any significant vocabulary achievement after they had received the treatments of study, an independent sample t-test was performed. The results, as is shown in Table 5, indicated that there is a statistical significant difference ($t_{2,58} = 14.71, p < 0.01$) between the performance of experimental group before and after receiving treatment. In other words, their vocabulary knowledge was improved as a result of treatment instruction. Therefore, the null hypothesis of study was rejected.

<table>
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<th>TABLE 5.</th>
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<tr>
<td>INDEPENDENT SAMPLE T-TEST OF THE EXPERIMENTAL GROUP ON POSTTEST</td>
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<td>t</td>
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<td>-14.71</td>
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The difference between two groups (control and experimental) regarding their performance on two tests (pre-test and post-test) is depicted in Figure 1.
VIII. DISCUSSION

It was statistically proved that the blended online instruction has significant impact on Iranian EFL learners' vocabulary knowledge. The use of computers and Internet in the process of learning new words is one of the areas that have received the attention of many researchers. Kiliçkaya and Krajka (2010) studied the impact of online learning on English vocabulary knowledge of Turkish learners. The learners of online class were compared to learners of traditional classes. The results showed that the learners who received online teaching performed better than the other group in the test of the vocabulary. The results of this study were in line with those of the previous studies.

In another study, Kirkgöz (2011) investigated the speaking ability of student teachers of English using face-to-face instruction as well as technology, i.e., video. At the end of the experiments, students' oral communication skills changed significantly. The results of this study are in tune with the finding of Kirkoz (2011).
IX. IMPLICATION

The application of blended online learning, from a pedagogical point of view, presented helpful insights for EFL teachers, EFL learners and syllabus designers.

The use of blended online learning itself cannot guarantee vocabulary learning. There should be a teacher to organize the materials, motivate, guide and give feedback to students. The outcomes of this study facilitated the EFL teachers' job to design and adapt language learning materials for improving vocabulary knowledge of participants. Moreover, as Allen (1983) points out, the current vocabulary learning activities were criticized because they take much of the class time and the teacher’s energy. If vocabulary learning integrates to other language skills and components like presenting through blended online instruction framework, it would help to save teachers' time and energy.

Blended online vocabulary instruction invites EFL learners to deeply process the lexical items. Learners can simply understand the prominence of such learning situations over traditional and boring classroom practices and strategies such as memorizing word lists.

The findings of this study may be helpful for syllabus designers in a sense that they can put them into practice and design materials around the learners' needs and abilities. The extent to which language learning materials incorporate practice is very important in syllabus design. The meaningful practice is resulted when topics, activities are relevant to the students’ lives, needs, and interests and have the potential to actively engage them in creating, understanding, and connecting to knowledge.

X. LIMITATIONS OF THE STUDY

This study had a number of limitations. It only focused on the students with intermediate level of language proficiency. Therefore, the range and variety of the participants were limited. Due to the regulations of language schools, teachers are not allowed to teach the students of their opposite sex. Therefore, the students that participate in this study were all females. It may affect the generalizability of the research findings.
The participants of this study were EFL learners who were learning English at a language institute not at universities as a field of study. It limited the scope of study.

Due to time limitations, this study did not measure the impact of online blended learning on the extent to which learners were able to retain lexical items.

XI. SUGGESTIONS FOR FURTHER RESEARCH

In this section, some suggestions are recommended for future studies, based on the limitations of the study and the problems that the researcher observed during the research.

The participants of this study were intermediate EFL learners. Another research can study the impact of online blended vocabulary instruction on learners of other levels of language proficiency.

In this study, the type of strategies and communication style of participants were investigated. Another research can use think-aloud protocol to understand the types of strategies and communication style that learners used in the blended online classroom.

The Post-test was administered immediately after the treatment sessions were ended. In other words, post-tests examined learners' immediate retention of lexical items. It is recommended for further studies to measure the long-term retention of vocabulary by another post-test administered several days later.

XII. CONCLUSION

The purpose of this study was to investigate the impact of blended online and face-to-face classroom on Iranian EFL learners' vocabulary knowledge. The results of study indicated that the use of online vocabulary learning along with current teaching methodologies, i.e., blended online vocabulary instruction, has a significant impact on Iranian EFL learners. Participating in a class that used a blended approach helped learners to improve their vocabulary knowledge.
The results of this study showed that blended learning provided more authentic and real-life language contexts for learners when it is compared with traditional and paper-based learning situations. These situations provided enthusiasm and excitement for learners.

Learners had more opportunities and situations to practice vocabulary items in online blended learning. Also, everyone can evaluate him/herself and check their understanding and progress.

To conclude, blended online vocabulary instruction was introduced as an effective teaching tool to help EFL learners to improve their vocabulary knowledge.
REFERENCES


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