On The Effect of Online/Offline Approaches on Vocabulary Achievement

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Abstract

The present study investigated whether online, offline, and blended approaches had any significant influence on vocabulary achievement of Iranian EFL learners in an instructional program. The participants were 100 students, majoring in English Teaching at Islamic Azad University of Ahvaz. The participants were at upper intermediate level of language proficiency. They took a vocabulary pretest and posttest. The results indicated that there was a significant difference between the traditional approach and the other three approaches. That is, computer-assisted teaching approaches significantly affected language learners' vocabulary learning. The findings also manifested that blended approach exerted significant influence on improving L2 vocabulary achievement. The findings implied that language learners who were thought under CALL approaches had more self-assurance than the other learners. Thus, computer-assisted approaches can help language teachers create more creative learning atmosphere and smooth the process of learning.
Key words: online, offline, blended, CALL program, synchronous, asynchronous

I. Introduction

Learning vocabulary often seems to be of essential importance to the typical language learner (Zimmerman, 2001). As Pintrich and Schunk (2002) state, those English language learners who have a small range of vocabulary knowledge are less able to comprehend text and communicate. Allen also (1983) emphasizes the importance of vocabulary learning in EFL/ESL programs. The importance of vocabulary learning becomes more important when it comes to English learning. The reason is clear, English has a rich and a very large group of vocabularies. That is because English vocabulary is a complicated mixture of Germanic and Romance word, vocabulary is a core component of language proficiency providing much of the basis for how well learners speak, listen, read, and write. Without enough vocabulary strategies, learners often achieve less than their potential and may be discouraged from language learning (Gorjian et al, 2012).

For many learners studying English, learning vocabulary seems to be boring and difficult as they have to memorize unfamiliar words (Nguyen & Khuat, 2003). Decarrico (2001, p.285) claims: "Vocabulary learning is central to first and second language acquisition and specialists now emphasize the need for a systematic and principled approach to vocabulary by both teachers and learners".

One of the ways which could help the learners to encounter few problems in the future is to find a way by which the learner takes the responsibility for his/her learning. In other words, the autonomy of the learner plays a crucial role in language learning and vocabulary learning in particular. According to Moras (2001, p.36), "the most important aspect of vocabulary teaching for advanced learners is to foster learner independence so that learners will be able to deal with new vocabulary items and expand their vocabulary beyond the end of the course".

To help language learners get rid of these problems, CALL programs have been used in education systems in general and learning English in particular. CALL as a multidimensional computer instrument has been put in practice by language teachers to make learning and teaching processes easy (Cummins, 2008). Vocabulary has been taught to EFL learners through online, offline, and blended approaches.

2.Related review of literature
2.1.Online approaches

With the fast development of broadband internet and computer technologies, online courses and thus cyber asynchronous learning have been employed more and more often exchanging information between instructors and students, and between students and their peers (Hew et al.,

2010). Cyber synchronous learning allows students to have more freedom to conduct their learning process without the constraints of time and space. Meanwhile, the more traditional cyber synchronous learning through TV or satellite broadcasting or some other teaching systems is now gradually disappearing (Ge, 2011).

Cyber asynchronous learning supports cry out the advantages of this learning approach. They point out that cyber asynchronous learning allows students to study through emails, blogs, etc., and students can make out their own schedule, without live interaction with the instructor (Kruse,2004). Cyber asynchronous teaching platforms normally can keep records of a student's online learning activities, including discussion threads and his or her interactions with peers and /or the instructor , which can be an important source of data for the assessment of the learner (Hew et al.,2010; Shi et al.,2006; Tanimoto et al.,2002). It is generally believed that synchronous interaction is essential to second language acquisition (SLA) (Lee, 2002). The cyber synchronous learning environment can duplicate the capabilities found in a physical face-to-face classroom (Keegan et al., 2005; Shi et al., 2006).

Asynchronous learning is a student-centered teaching method that uses online learning resources to facilitate information sharing outside the constraints of time and place among a network of people. This approach combines self-study with asynchronous interactions to promote learning, and it can be used to facilitate learning in traditional on-campus education, distance education, and continuing education. This combined network of learners and the electronic network, in which they communicate are referred to as an asynchronous learning network (Nayas, 1997). These asynchronous forms of communication are sometimes supplemented with synchronous components, including text and voice chat, telephone conversations, videoconferencing, and even meetings in virtual such as *Second Life*, where discussion can be facilitated among groups of students (Bourne, 1998).

It is conventional to divide CMC into two basic modes including synchronous (SCMC) and asynchronous (ACMC) communication capacity with high and multiday interactivity (Levy & Stockwell, 2006; Luppicini, 2007; Pfaffman, 2008). SCMC discussion involves users exchanging opinions in real time format via chat rooms, instant messengers, or video conferencing. Participants in SCMC environment post typed message which appear on the computer screen; and they can scroll back and forth to review previously sent stretches of the discourse text. SCMC discussion not only allows learners to communicate similar to FTF discourse (Lee, 2001), but at the same time increase learner monitoring of language usage (Sykes, 2005). Learners must however sign onto a computer system simultaneously to launch the network, which is considered the downsides of this mode of communication with regard to different class times and time zone (Levy & Stockwell, 2006).

On the other hand, in ACMC, such as World Wide Web (WWW), e-mail, web blog, newsgroups, and postings in bulletin board system, interaction does not need to be simultaneous. ACMC mode allows students more time to read, understand, reflect and respond to the posted written messages. Learners also have a chance to monitor and edit their own or other learner's writing. ACMC has been widely used in collaborative writing and brainstorming, fostering critical thinking habits of the participants (Lee, 2004).

Sometimes students in the online environment just need that extra nudge to feel connected in order to truly excel. As instructors, we can facilitate community-building in an asynchronous environment by utilizing synchronous tools, such as Wimba, Skype, Elliminate, and others available to us via our learning management system or outside of the LMS.

Synchronous and asynchronous communication tools are used to facilitate collaboration between individuals and groups of people, and are particularly useful for e-learning environments.

Synchronous communication occurs in real time and can take place face-to-face, and as technology has evolved, can take place irrespective of distance (for example, telephone conversations and instant messaging). Asynchronous communication is not immediately received or responded to by those involved. To enhance collaboration between people, many software applications offer a blend of synchronous and asynchronous technology. Historically, synchronous communication was only available either in person with spoken word or within line of sight using signals. The telegraph and the telephone extended synchronous communication beyond line of sight. Radio communication began to remove the restriction of place by allowing people communication from whenever they had the appropriate equipment to send and receive signals. Today, synchronous communication includes satellite, cell phone, and internet technologies and allows people to work together instantaneously regardless of their location.

A growing body of academic scholarship has focused on the benefits of combining synchronous and asynchronous communication tools into the design of online learning environments. According to Oztok et al., (2012), synchronous and asynchronous communication tools should not be evaluated in isolation, but rather how they can supplement one another. There is a great need to consider the learning value that these tools afford students, thus an informed pedagogy is critical in the development and use of these tools in online learning environments. As Oztok et al., (2013) argue, learning - regardless of the context - is a social activity that is enriched through social interactions, collaboration and contextual experiences, thus positing the potential affordances of a blended synchronous-asynchronous online learning environment within a social constructivist framework that owes much to the work of Dewey (1963) and Vygotsky (1978).

Giesbers et al., (2013) argue that students may likely feel less engaged with the course if the instructor relies primarily on the use of asynchronous communication. Regular online synchronous meetings are likely to increase student motivation to complete tasks (Pullen & Snow, 2007) and are likely to increase the quantity and quality of asynchronous discussion (Giesbers et al., 2013; Oztok & Brett, 2011).

Blended language learning (i.e., integrating the use of technology into classroom-based learning and teaching) is still a relatively new concept, but recent research (Pena-Sanchez & Hicks, 2006; Strakcke,2005; Strack,2007) appears to indicate that when "appropriately" implemented, blended learning can significantly improve the learning experience (Marsh,2005).

Blended learning refers to a mixing of different learning environments. The phrase has many specific meaning based upon the context in which it is used. Blended learning gives learners and teachers a potential environment to learn and teach more effectively (Marsh, 2005). When considering blended learning, there is no single perfect blend, nor is there a set or simple formula for making a "good" blend. There are, however, a number of important factors essential to achieving an "effective "blend (Marsh, 2005).

Interestingly, most scholarship in this area focuses on the collaborative affordances that a blended synchronous-asynchronous environment would provide students (Giesbers et al., 2013; Kienle, 2008; Murphy & Coffin, 2003; Oztok et al., 2013; Pullen & Snow, 2007). Pullen and Snow (2007) argue that an online course that blends asynchronous tools with synchronous instructions and discussion provides students with improved support and guidance. Online learning environments that combine features such as voice interaction, group file sharing, whiteboard capabilities, video and recording/playback provide a kind of virtual extension of a traditional classroom where mentor/teacher and peer-to-peer interaction is supported. This 'social presence,' according to Oztok et al., (2012), is an important factor in determining students' motivation, depth of learning and satisfaction with the course.

2.2 CALL advantages for vocabulary acquisition

As Stockwell (2007) stated, vocabulary has been one of the most commonly taught language areas through technology in recent years (Dodigovic, 2005; Yoshii, 2003; Yoshii & Flatiz, 2002). Genc (2012) asserts that the rapid development and enormous advancement in computer technologies have been affecting all aspects of life for more than three decades. Gorjian, et. al (2012) state that language teaching has not remained inflexible towards the profound changes taking place in other areas of knowledge and advances in network technologies, connected with asynchronous CALL approaches, which have resulted in the emergence of virtual worlds to facilitate synchronous (online) versus asynchronous (offline) communication among users (Gorjian et al.,2011). We can use technology to help students and teachers learn and teach better and more effective. Zhao (2004) state a common belief that technology is just a tool, a means to an end in education.

Previous research confirms that lexical development plays a principle role in different aspects of L2 acquisition (Debot, et. al l997; Levlet, 1989; Nation, 2001; Salaberry, 2001; Yanguas,2009). Therefore, must current studies on L2 vocabulary acquisition focus on determining the most effective ways of interfacing computer-mediated resources with traditional best practices for vocabulary instruction. Some of this research has studied multimedia annotations, suggesting a positive effect on the comprehension of written texts and incidental vocabulary acquisition.

In research on vocabulary learning, a distinction has often been made between two dimensions of vocabulary knowledge: Depth of knowledge and size, or breadth, of knowledge (Read, 2000). Various kinds of knowledge are associated with a word that a learner must know, ranging from knowledge related to its pronunciation, spelling, register, stylistic, and morphological features (Nation, 2001) to knowledge of the word's syntactic and semantic relationships with other words in the language, including collocation meanings and knowledge of antonym, synonymy, and hyponymy (Hulstijn,2001;   Read,2000). Acquiring both dimensions of vocabulary knowledge seems a necessity for foreign language learners.

It has been greatly argued that computer technologies are able to support learning in a number of ways. Several features of the computer such as multimedia are believed to increase vocabulary development and reading comprehension. Radi (2002), states that multimedia include text, color, graphical, image, animation, audio, sound, and full motion video in single application that can be useful in improving student's understanding of language.

3. **Research questions**

As a whole, the purpose of this study is to investigate whether online, offline, and blended approaches had any significant effect on vocabulary achievement of Iranian EFL learners in an instructional reading program. More specifically, the study tries to answers to the following questions:

Q1: Does offline approach to English vocabulary teaching significantly affect Iranian EFL learners' vocabulary achievement?

Q2: Does online approach to English vocabulary teaching significantly affect Iranian EFL learners' vocabulary achievement?

Q3: Does bended approach to English vocabulary teaching significantly affect Iranian EFL learners' vocabulary achievement?

4. Method
4.1. Participants

The participants were 100 female Iranian EFL learners, studying at Islamic Azad University of

Ahvaz. They were majoring in English Teaching. They were selected through random sampling procedure from the whole population of 180 students. The participants were freshman, ranging in age from 18 to 22. The participants were divided into four groups of the same size of 25 persons in each group: offline group (A) online group (b) blended group (c) and control group (D).

4.2.Instruments

A placement reading test was administered to all the students to select the homogenous students. The test was selected from Longman (2005) TOEFL practice test book. After collecting the data, the results of the test indicated that in terms of language knowledge, the subjects were homogeneous. In other words, they were at the upper intermediate level.

4.3.Procedure

Three groups received treatment through the use of computers in three different ways, and the forth group or control group was taught without the use of computer. All groups received posttest at the end of the treatment. After estimating the results of homogeneity test, the participated were divided into four groups of 30. The participants took the pretest before receiving the treatment. The administration of the posttest lasted about 45 minutes. After receiving the treatment, the posttest was administered to check the efficiency of the treatment. The administration of the test lasted 45 minutes.

The participants in online course utilized Skype software to have a close connection with the instructor. Students connected the instructor via microphone or video camera. They interacted with the teacher through talking directly by microphones or indirectly by typing on their computer keyboards. The students could ask questions and share their responses to other students through online chat. The instructor introduced the vocabularies by CDs, showed pictures or video clips, add annotations, used online quizzes and exercises, an directed online discussion through computer in online way.

In the offline class, the instructor had to take on a double responsibility because the teaching cycle constantly shifted between a teacher-centered atmosphere to a student-centered atmosphere. The instructor was first at the center of the class to cater for teaching and helping learners to solve the learning difficulties. The online materials and computer equipment were available for students to complete the course. The instructor informed the students that offline approach allowed them to listen to CDs of the related course book, containing the definition of selected words, correct pronunciation, use various software dictionaries, and watch relevant video clips.

Because of the changeable nature of blended approach, the instructor chose her own preference for the treatment. The blended class was the combination of traditional, online, and offline classroom activities.

5. Results and discussions

Descriptive and inferential statistics were utilized to analyze the data. Initially, all the gathered data from four groups in pre-test were analyzed. Then, the data gathered after the treatment was analyzed to realize whether online, offline, and blended CALL program had any significant effect on the participants' vocabulary achievement or not.

To understand the research questions concerning the effect of online, offline, and blended approach on learner's vocabulary achievement, the descriptive statistics were conducted which are presented in Table 1.

Table 1 *Descriptive statistics of the pretest and posttest*

Groups	N	Mean	Std. Deviation
Pretest Offline	25	18.57	17.96
Pretest Blended	25	23.43	14.82
Pretest Online	25	22.77	12.46
Pretest Control	25	15.33	11.13
Posttest Offline	25	24.00	16.44
Posttest Blended	25	38.33	18.19
Posttest Online	25	25.33	18.76
Posttest Control	25	24.90	18.08
Valid N (list wise)	25		

As indicated in Table 1, in pretest, the mean of the blended group was (M = 23.43) while the mean of online group was (M = 22.77), and the mean of offline group was (M = 18.57).

Moreover, the mean of control group was (M = 15.33). Thus, the blended approach had the highest mean among the four groups, showing the positive attitude of the participants towards the approach. Furthermore, in the post test results, the mean of the blended group was (M = 38.33) while the mean of online group was (M = 25.33), and the mean of offline group was (M = 24.00).

Consequently, the blended approach had the highest mean, showing the greatest effectiveness of this approach in vocabulary achievement among other approaches. The descriptive statistics of the pretest is indicated in Table 2.

Table 2 *Descriptive statistics of pretest*

Tests	N	Mean	Std. Deviation
Pretest Offline	25	20.77	17.96
Pretest Blended	25	33.23	14.10
Pretest Online	25	21.26	14.57
Pretest Control	25	21.53	11.22
Total	100	21.70	14.76

Table 3 shows that there is no significant difference among the mean of four groups of the study as the observed F (.16) is less than the critical value at $p < .05$. Therefore, it could be indicated that there is not a significant difference among the mean scores of four groups, so they are at homogeneous levels.

Table 3 *One-way ANOVA for the pretest*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	114.14	3	44.46	.16	.810
Within Groups	23121.66	96	180.618		
Total	22214.80	99			

After receiving the treatment, the same posttest was given to four groups. The descriptive statistics of the posttest is shown in Table 4.

Table 4 *Descriptive statistics for posttest*

Tests	N	Mean	Std. Deviation
Posttest Offline	25	33.80	17.26
Posttest Online	25	36.51	16.30
Posttest Blended	25	48.26	17.38
Posttest Control	25	30.73	17.88
Total	100	37.76	27.38

Table 4 illustrated the means of four groups on the posttest of vocabulary. The blended group (M =48.26) had the highest mean on the posttest whereas online group and offline group had lower means. The control group had the lowest mean among the other groups. To explore the differences among the means of the groups, a one-way analysis of variance was run. The results are shown in Table 5.

Table 5 *One-way analysis of variance for post test*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3684.53	3	1228.17	4.46	.00
Within Groups	31882.13	96	274.84		
Total	35566.66	99			

Table 5 shows that there is a significant difference among the mean scores of the four groups of the study, F (3,96) at p<.05. To compare the mean differences in using online, offline, and blended approaches and locate the homogeneous subsets of the mean score, a post-hoc Scheffe test was used. The results of which are demonstrated in Table 6.

Table 6 *Multiple comparisons between the means*

Groups	Groups	Mean Difference (I-J)	Sig.
Offline	Online	2.20	.96
	Blended	13.33[*]	.02
	Control	.066	1.00
Online	Offline	2.20	.96
	Blended	11.13	.08
	Control	2.26	.96
Blended	Offline	13.33[*]	.02
	Online	11.13	.08
	Control	13.40[*]	.02
Control	Offline	.06	1.00
	Online	2.26	.96
	Blended	13.40[*]	.02

As shown in Table 6, there is a difference between blended group and traditional group (sig. = 0.01). Therefore, it could be mentioned that blended approach has significant effect on learners' achievement. The results also showed that there was a significant difference between the mean of blended group and mean of offline groups (sig. = .02). That is, blended approach was significantly more effective than offline approach in teaching vocabulary.

6. Conclusions

One of the serious problems, many language teachers have in the universities in Iran, is the linguistic diversity of the students in English courses, which are usually populated classes, held once a week. Therefore, the students have limited opportunity to contact the teacher and classmates. Besides, as English is taught as a foreign language, the students have rare opportunity to communicate with native speakers of English. Thus, language teacher is responsible for providing the most fruitful teaching activities and learning environments, which improve reading ability and vocabulary treasure of the students as the most fundamental aspects of language learning in EFL instructional program in Iran. In a difficult situation, English teacher has a central role and should devote a lot of energy to motivate language learners, which leads to quick teachers' burn out. Concerning the paramount significance of CALL, the considerable influence of computer-assisted instructional materials cannot be taken for granted.

The results of the present study provide an empirical support for online, offline, and blended approaches to reinforce language learners' vocabulary retention and recall. Through use of online approach, language learners can have more exposure to online instructional materials, which improve their motivation. In online approach, the students' self-autonomy and self-assurance are developed. In offline approach, the students can receive insightful feedback from teacher and students, which develops language learning process. In blended approach, language learners can not

only have great exposure to a variety of instructional materials but also can get insightful comments from peers and teachers to develop language learning process.

Increasing learners' autonomy through using offline approach also enables language teachers to engage language learners in a variety of supplementary materials to develop reading proficiency. Teachers can provide language learners with appropriate supplementary materials based on individual differences, which improves language learning process to a great extent.

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