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The effects of blended learning on EFL students' vocabulary enhancement

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Abstract

Blended learning approach in teaching foreign language has become a matter of considerable interest to language teachers all over the world. As opposed to pure e-learning which refers to using only electronic media to learn, blended learning supplement traditional face-to-face teaching and learning environment with different kinds of technology-based instruction. Many higher education institutions today are using blended learning as a supplementary means in developing students' vocabulary knowledge. The present study aimed at investigating the effects of blended learning strategy in teaching vocabulary and the students' perceptions of blended learning approach in learning vocabulary. A total of 40 students from two classes who study intensive English at METU prep-school in Turkey participated in the study. The experimental group studied the target vocabulary items through blended learning strategies while the control group learned the same vocabulary items through traditional way of teaching. After the instruction period, a paper-based vocabulary test was administered to both groups of students. As for the qualitative data, semi-structured interviews were used to identify students' views on blended learning. The interview focused on students' perceptions of the advantages and disadvantages of blended learning, and their suggestions on improving blended learning environment. The study closed with pedagogical implications and suggestions based on the students' scores on vocabulary tests, opinions and expectations concerning the efficiency of blended learning strategies in learning vocabulary.

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1. Introduction

Vocabulary is the backbone of any language. Without extensive vocabulary knowledge, even those who show mastery of grammar might experience the failure to communicate. Many foreign language learners know the feeling of not being able to remember the right word instantly in a conversation because of the limited range of vocabulary they know. This feeling of inadequacy often hinders further development of the language. On the other hand, vocabulary does help language learners to form sentences and express themselves in meaningful ways. It has been proved to be powerfully related to L2 acquisition with many studies as well.

Mastery of vocabulary can only be achieved with the teaching strategies that appeal to various learning styles. Recent studies have proven many benefits of different technology-based instructional materials for effective verbal and written communication (Schmidt & Hegelheimer, 2004; Pazio, 2010; Khazaei & Dastjerdi, 2011). Therefore, many higher education institutions today are using blended learning as a supplementary means in developing students' vocabulary knowledge. Blended learning approach in teaching foreign language has become a matter of considerable interest to language teachers all over the world. As opposed to pure e-learning which refers to using only electronic media to learn, blended learning supplement traditional face-to-face teaching and learning environment with different kinds of technology-based instruction. Bielowaski and Metcalf (2003) report that blended learning focuses on optimizing achievement of learning objectives by applying the right learning technologies to match the right learning styles to transfer the right skills to the right person at the right time.

Teaching vocabulary through web-based tools is not totally a new trend. Marsh (2012) states that we have always used a "blend" of teaching approaches in order to provide as rich a learning environment as possible for our learners. What is new is the "expectation" of our learners to use technology in and out of the classroom as part of the learning process. Concerning the individual learner differences and classroom instruction, Lightbown and Spada (2013) also believe that teachers can help learners expand their repertoire of learning strategies and thus develop greater flexibility in their ways of approaching language learning. Thus, various instructional materials including videos, blogs, online forums and other digital tools provide students opportunities to practice the language outside the class.

Most of the researchers who have studied blended learning approach and its place in enhancing vocabulary knowledge listed a great number of positive effects. Zhang, Song and Burston (2011) examined the effectiveness of vocabulary learning via mobile phones and compared two groups of students at a Chinese university. While one group of students studied a selected list of vocabulary via text messages, the other group of students worked on the same list through paper material. When students' test results were compared, their findings revealed that "students can learn vocabulary more effectively short-term via mobile phones than with paper material". Similarly, Khazaei & Dastjerdi (2011) made a comparative study on the impact of traditional and blended teaching on EFL learners' vocabulary acquisition. The study aimed to explore the application of SMS to the blended method of teaching L2 vocabulary. Students were evaluated on their recognition and recall of vocabulary items. The results revealed that the students who received the learning content through blended teaching approach had better test results than the group of students who received the learning content in the traditional way. Based on the research findings, they confirmed "the significant supplementary role of Mobile-Assisted Language Learning (MALL) in the teaching of new vocabulary items." Yiğit et al. (2013) also used blended learning model to optimize learning in teaching Algorithm and Programming course in Computer Engineering Education in Süleyman Demirel University Computer Engineering Department. In their comparative study, blended learning is achieved through Learning Management System (LMS) of university. Evaluation was based on students' homework, midterm and final exam grades of the students. Results of the study showed in blended learning education, education was more effective; students' achievements were better than expected in comparison to traditional education, however; algorithmic thinking abilities of students who enrolled in the Algorithm and Programming Course in blended and traditional education were close.

There are very few empirical studies in the literature which found blended learning instruction had no impact on students' academic achievements. Alshwiah (2009) investigated the effects of a proposed blended learning strategy and analyzed students' attitudes toward the English language at Arabian Gulf University. The sample was divided into two groups: control group and experimental group. Findings indicated no significant difference between two groups regarding achievement or attitude towards English Language. Similarly, Chang et al. (2014) conducted a

study to examine the effects of blended e-learning on electrical machinery performance. Participants were two classes of 11th graders majoring in electrical engineering. The participants were randomly selected and assigned to experimental group or the control group. The experiment lasted for 5 weeks. The results showed that there were no significant differences in achievement test scores between blended e-learning and traditional learning.

Exploring the impact of blended learning strategies in teaching vocabulary might reveal individual differences in vocabulary learning among students and encourage EFL teachers to design instructional materials in accordance with their students' preferences. Present study, therefore, aims to identify not only students' perceptions of blended learning but also the impact of this strategy on students' academic achievement. With respect to this aim, the present study raises the following research questions:

1. Is there any significant difference between post-test scores of face-to-face learners and the learners who were exposed to blended learning instruction with regard to their vocabulary knowledge?
2. What are the students' perceptions of and attitudes towards blended learning instruction?
3. What are the pedagogical implications of using blended learning strategy in teaching vocabulary in English?

2. Method

2.1. Research participants

In order to investigate the impact of blended learning approach in EFL teaching on students' achievement, a homogenous sample of 40 intermediate level students from two intact classes who study intensive English at METU in Turkey participated in the study. Students ranged in ages from 18 to 20.

Table 1. Demographic information on participants

Condition	N	Level	Learning Method	Age Range
Experimental Group	20	Intermediate	Blended Learning	18-20
Control Group	20	Intermediate	Traditional Learning	18-20

2.2. Instruments

The instruments that were used to collect quantitative data are a pre-test and a post-test. While the pre-test was comprised of 20 multiple choice questions and taken as a vocabulary quiz, post-test was not in the quiz format. Vocabulary section of the mid-term exam was utilized as the post-test. The qualitative data of the study were obtained from the semi-structured interviews, including a few free-flowing questions, conducted with 8 students from the experimental group in order to identify their views on blended learning. Students' interviews were recorded and transcribed respectively in Turkish. Regarding the efficiency of using semi-structured interviews, Barriball and While (1994) state that semi-structured interviews are well suited for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issues and enable probing for more information and clarification of answers.

2.3. Procedure of the study

The purpose of the pre-test was to assess the students' existing vocabulary knowledge and to make sure that the participants were all at the same level of language proficiency. The experimental group studied the target vocabulary items through blended learning strategies while the control group learned the same vocabulary items through face-to-face way of teaching. Blended learning instruction template was designed by the researcher to provide students

opportunities to use the language in and outside the classroom. First week was allocated as in-class session to introduce Web 2.0 tools such as quiz let, spelling city and snappy words. For example, students had the chance to learn how words associate in a visually interactive display through snappy words, which is a lexical database developed by Princeton University. Students also practiced the target vocabulary items of the units in their textbooks through Quizlet, which is another digital tool developed to make studying vocabulary more enjoyable and engaging. The teacher created a Quizlet class and tracked the students' progress online.

Digital visual learning tools aimed at encouraging students to practice new target vocabulary items in their own time. In-class sessions, on the other hand, the teacher focused on communicative activities through pair and group work, creating a collaborative atmosphere.

After 6-weeks of the instruction period, post-test was administered to both groups of students. To calculate the test scores, independent t-test was used to analyze the findings, and the significance level was set at 0.05 ($p < .05$) in the study. Both pre-test and post-test were prepared by the testing office at METU. All exams are examined by experienced instructors and native speakers according to language, clarity, appropriateness of the questions to the level of the students and timing. Therefore, the content validity of the tests was evaluated by experts with more than 5 years of teaching and testing experience. To check the reliability of the pre-test, the Kuder Richardson-20 (KR-20) coefficient was used and found to be 0.79, which indicates that the reliability of test is high.

Table 2. Means and standard deviations of pre-test scores for two groups

Group	N	Mean	Std. Deviation
Experimental Group	20	52.5	15.686
Control Group	20	49.75	17.112

Although the proficiency level of the students were determined by a standardized proficiency test at the very beginning of the academic year and students were placed in their classes according to their test results, all students were asked to take the vocabulary quiz to make sure that students are at the same level in terms of their vocabulary knowledge as well.

Table 3. The independent sample t-test results of pre-test

Levene's Test for Equality of Variances	t-test					
	f	Sig	t	df	Sig. (2 tailed)	Mean Dif.
Equal Variances Assumed	.185	.670	.626	38	.535	3.25000
Equal Variances not		.605	37.716		.535	3.25000

As shown in Table 3, the existing significance value (.535) is larger than the significance level (.05), which indicates that there is no significant difference between the two groups of learners with regard to their existing vocabulary knowledge.

3. Findings and results

3.1. Findings based on the research question 1: "Is there any significant difference between post-test scores of face-to-face learners and the learners who were exposed to blended learning instruction with regard to their vocabulary knowledge?"

Table 4. Means and standard deviations of post-test scores for two groups

Group	N	Mean	Std. Deviation
Experimental Group	20	5.65	2.207
Control Group	20	5.25	1.970

As displayed in Table 4, the students who were instructed with blended learning strategies had similar points from the vocabulary part of the exam ($M=5.65$, $SD=2.207$) with those who were taught through face to face teaching ($M=5.25$, $SD=1.970$).

Table 5. The independent sample t-test results of post-test

	Levene's Test for Equality of Variances		t-test			
	f	Sig.	t	df	Sig. (2 tailed)	Mean Dif.
Equal Variances Assumed	.458	.503	.605	38	.549	.40000
Equal Variances not		.605	37.520		.549	.40000

As shown in Table 5, since the obtained p (0.549) is greater than 0.05, the test is not significant at 0.05 level which indicates that there is no significant difference between the two groups of learners with regard to their vocabulary knowledge after 6-weeks of blended instruction period. Based on the test results, it can be inferred that the teaching vocabulary through blended learning instruction model does not have a positive impact on the vocabulary test scores of Turkish preparatory school students.

3.2. Findings based on the research question 2: "What are the students' perceptions of blended learning instruction?"

Once the interviews were transcribed, students' responses were categorized and coded into different themes such as advantages, disadvantages and suggestions of blended learning instruction. Recurring, common comments and explanations indicate that although students enjoy and appreciate learning and practicing new vocabulary items through blended learning, they did not enjoy the digital tools as well as in-class activities prepared by the teacher. They seemed to be aware of the importance of integrating the use of technology into classroom teaching, however; they obviously didn't like the teacher's "blend". Students' comments show that the aim of expanding vocabulary knowledge following blended instruction model was not achieved:

"Various multimedia tools including short videos, TV series, and newspaper should be integrated in order to encourage students to learn vocabulary online"

"We are lazy, students see the Internet as a form of entertainment so we prefer spending time socializing on social media sites rather than studying vocabulary with web-based tools"

"We are not accustomed to learning vocabulary via online activities"

"I prefer blended learning instruction because it enables me to practice the vocabulary we learn in the classroom"

3.3. Findings based on the research question 3: “What are the pedagogical implications of using blended learning strategy in teaching vocabulary in English?”

- Teachers need training on how to employ blended learning instruction model effectively, because online courses, no matter how efficient they are, cannot facilitate learning by itself. Digital tools are only as good as the teachers.
- Teachers should encourage students to develop their learning skills and to continue learning on their own after leaving the classroom. If developing learner autonomy becomes the main concern of all teachers, students will eventually succeed in.
- As first comes motivation before methodology, some classroom activities and tasks should aim at raising students’ awareness of their own learning.
- Students’ answers to interview questions indicate a general feeling of dissatisfaction of the digital tools used by the researcher. TV series, short video films, newspapers and social networking sites are found to be more enjoyable and appealing online tools by the students.

4. Conclusion and suggestions

The results of the study are not in line with many of the previous studies which have discovered many advantages of blended learning instruction over face-to-face instruction. On the contrary to many other studies, students did not achieve great learning outcomes by the end of 6-weeks blended instruction program. The results of the research might be attributed to the short duration of the study.

Results indicated that the proposed blended learning strategy did not improve the students’ vocabulary achievement. Although students were satisfied with the proposed blended learning strategy in teaching vocabulary and prefer it to the traditional classroom based learning, they did not want to spend time studying new vocabulary items outside the classroom due to their lack of motivation. Since the students in this particular study do not have the self-discipline to make e-learning a powerful option which allows them to work independently at their own pace, it is highly recommended that curiosity and authenticity should be provoked by different types of online tools.

It is important to note that there is no single way of blended route. Blended online vocabulary instruction could be effective to help EFL learners improve their vocabulary knowledge if digital tools are selected in accordance with students’ needs and interests. Needs analysis should be conducted to make the best selection of online tools and activities for each particular group of students. Blended learning, when well implemented, has the potential to support vocabulary learning process since it increases the amount of learning compared to that in-class learning.

Appendix A.

A.1. Appendix A. Interview questions

Interview questions on students’ perceptions of blended learning

- What is your general opinion about traditional, face to face learning? Why?
- What do you like about online learning?
- How much time do you spend on computers to learn new vocabulary items?
- Did you face any problems in online learning? If yes, what problems did you face?
- Learners aren’t using the Quizlet or some other digital tools a lot; can you give a reason(s) for that?
- What sort of medium do you think suits you the most: blended learning or traditional classroom learning?
- What are your recommendations for the improvement of the implementation of blended learning?

A.2. Appendix B. Consent form

Please read this consent agreement carefully before you decide to participate in the study.

Purpose of the research study: The present study aims at investigating the effects of blended learning strategy in teaching vocabulary and the students' perceptions of blended learning approach in learning vocabulary. In order to find out the effects of the blended learning strategy in teaching vocabulary, vocabulary quiz results and midterm exam results of a total of 40 students from two classes who study intensive English at METU prep-school will be used to obtain quantitative data.

Benefits: There are no direct benefits to you for participating in this research study. The study may help educators understand the advantages and disadvantages of blended learning strategy in teaching vocabulary.

Confidentiality: All data/the names of the participants will be treated confidentially.

Questions/further Information about the project: Please contact the researcher on sezen.tosun@metu.edu.tr to have any questions answered or if you require further information about the research.

I give permission for my vocabulary quiz/midterm result(s)/responses/comments to be used in the analysis for this research. _____

I do NOT give my permission for my vocabulary quiz/midterm result(s)/responses/comments to be used in the analysis for this research. Please withdraw them from the study. _____

Name-Surname: _____

Date: _____

Signature:

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