


<b>On the Effectiveness of Web-based Instruction on Iranian EFL Learners' Vocabulary Knowledge</b>			<b>Linguistics</b>
		<b>Keywords:</b> Web-based instruction, skill based instruction, lexical competence, distance education, Technological options.	
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<b>Abstract</b>			
<p>Lexical competence is undoubtedly at the heart of language learning. As far as Technology has been vastly used for educational purposes in modern countries, the present study focuses on using Web-based instruction on learning vocabulary. To this end, 300 freshmen students were selected randomly from whole students' population who registered for their first semester of study at Rodaki University of Tonekabon, Iran. The randomly selected students were given Oxford placement Test in order to achieve homogeneity in terms of their level of language proficiency. One hundred students gained the necessary requirements for the entrance into the experiment. They were randomly assigned to two groups, namely an experimental group (50 students) and a control group (50 students). Two groups were pre-tested by teachers' made vocabulary knowledge test. The experimental group received instruction through Web-based activities. However the control group was taught by skill based (traditional) approaches to vocabulary. The results of research indicated that the group whom instructed the vocabulary by Web-based instruction performed better on post-test than those who learned by traditional way. The findings showed that the differences between experimental and control group were significant at the level of .05.</p>			

**1. Introduction**

Language use is purposeful, and its main purpose is communication. No one is able to communicate meaningfully without an adequate grasp of basic vocabulary knowledge. Likewise, Vocabulary teaching and learning have some crucially important roles to play in foreign language teaching and learning.

In most schools and universities in Iran, Translation and repetition are still among the most favorite practices for vocabulary instruction. But unfortunately learners experience ample difficulties in learning new words. Nation (1990) states that learning a word is defined as knowing in spelling, pronunciation, collocation and appropriateness. That is, knowledge of a word is more than mere some knowledge of its meaning. Improving lexical competence is an arduous task that every ESL/EFL learner has to accomplish if they wish communicate successfully and expressly in another language. However, the current methods of vocabulary instructions failed to cater for the facilitative conditions necessary for vocabulary acquisition to take place. Therefore the current researcher made an attempt to provide lively context for learning vocabulary for students by means of the Web-based instruction.

Vocabulary is an element that links the four skills of speaking, listening, reading and writing together. Vocabulary learning strategies are one part of language learning strategies which in turn are part of general learning strategies (Nation, 2001). Thus students need training in vocabulary learning strategies the most. In comparison with other task in process of SLA, learners use more strategies in learning vocabulary (Schmitt, 1997). Because of significance learning vocabulary as part of learning language, many efforts have been done by teachers and researchers so that learner can learn and retain better.

Technology has found a welcome home in foreign language education. Language instruction that integrates technology has become popular and has had remarkable impact on language learning. The use of technology has not only created new opportunity with traditional classroom but has also served to expand learning experience beyond the popular notion of classroom. Using the Internet is becoming widely used

delivery alternative at universities notion wide. “Internet based distance learning” yields literally hundreds of sites devoted to language learning.

Web-based Instruction is defined as a “hypermedia-based instruction program which utilize the attributes and resources of the World Wide Web to create a meaningful learning environment where learning is fostered and supported” (khan, 1997, p.6). WBI is dynamic in nature and, therefore, enable the sharing and updating of information almost instantaneously (Rosenberg, 2001). The ability of the Internet to make learning possible regardless of geographic location or time of day has made WBI a very attractive recruiting and retention tool for colleges and universities worldwide (William, 2008).

Despite all of the convenience and expanded accessibility these days, little has been researched on using Internet or Web-based instruction on vocabulary learning. The present study aims to investigate differences between Classroom-based instruction and web-based instruction in terms of vocabulary learning.

## 2. Literature Review

Nowadays, technology in general and the Internet in particular make the world a global village. Access to a world of knowledge can be made easily available with the click of a mouse. According to Franklin and Peat (2001), teaching and learning freed themselves from the slavery of particular space and time. Classrooms are now a "virtual learning environment." There is now a general agreement among many scholars that technology can improve language learning. Knowlton (2000) argued that Web-based education is student-centered in that it capitalizes on the role of learners' contributions in learning process.

Relan and Gillami (1997a) define Web-Based Instruction (WBI) as: “...the application of a repertoire of cognitively oriented instructional strategies within a constructivist and collaborative learning environment, utilizing the attributes and resources of the World Wide Web.” There is some sufficient evidence to claim that WBI is just as effective, or even more effective, than the traditional classroom-based instruction (Goldberg, 1997; McCollum, 1997; Russell, 1996).

The past few decades have seen a huge rise in the number of teachers using computers and the Internet in their classrooms. Computer can help learners to study language individually with their own pace in a motivated atmosphere with a high level of interactivity (CELLAT 2008). Web-based instruction offers multiple dimensions of use in EFL teaching and learning. Also, the Web has become a powerful tool for learning and teaching in distance education. Students can learn via the web just as effectively, or in some cases more effectively, than those in the traditional classroom (Gerhing, 1997; Witherspoon, 1996). Since vocabulary learning is an indispensable and time consuming part of language learning, numerous efforts have been made to facilitate and enhance the complex process of vocabulary learning (Goodfellow, 1994).

Veda Aslim Yetis (2010) conducted a study which focused on learning vocabulary by Web-based instruction. His samples were 17 Turkish students who studied French. The students were taught Vocabulary by traditional way for a month and then participated in exams. In the following month the lessons were conducted via the Internet on the web site. The web site <http://Lexiquefle.free.fre> was used and it was built by Anne Fournier Perrot and Thierry Perrot (French teacher-trainers). Again the students partook in some exams. Results showed that the average scores obtained from exams made after each class has risen when the Internet was used.

Baturay, M., Yıldırım, S., & Daloğlu, A. (2009) conducted a study on effects of web-based spaced repetition on vocabulary retention of foreign language learners. The focus of study was to examine the effects of web-based supplementary material on intermediate level English language learners' vocabulary retention by presenting the vocabulary items to students through spaced repetitions.

WEBVOCLE, a web-based vocabulary learning system in which the contextual presentation of the words was enriched with audio and visual multimedia resources and the retention of the words was enhanced with 'spaced repetitions', was used as a supplementary vocabulary development material. Three modules and their repetitions, consisting of texts and exercises such as multiple choice, gap-filling and cloze tests, were made accessible to learners on the web. Sixty nine Turkish students were participated in the study. The treatment implemented during the spring semester of 2006-2007. Participants were given vocabulary retention tests to measure their vocabulary development. Based on the results of the study, it concluded that WEBVOCLE proved to be effective in increasing the retention of participants' vocabulary through spaced repetitions.

Amy Minton Hayes designed a study on effects of internet on vocabulary comprehension and motivation in the content areas. Along with her class (eighteen first grade students); three other first grade classes (fifty-six other first grade students) completed a science unit on weather. The other three classes employed a traditional method of teaching using the science book, workbook, and suggested experiments. Her class used some of these methods along with the use of the Internet as a source of information and research. All four classes took a Chapter Test and an Outcome Test to determine their mastery of the weather objectives. After comparing the results of the tests she concluded that using internet had improved the control group vocabulary learning and after gathering the questionnaire appeared that they were more motivated than the other students.

The current research is an attempt to investigate the possible effects of Web-Based Instruction of vocabulary on Iranian EFL Learners' vocabulary knowledge in an input-poor Environment. The research question and hypothesis are as follows:

**Research Question:** Does Web-based Instruction for vocabulary enhance Iranian EFL learners' vocabulary knowledge?

**Null Hypothesis:** There is no relationship between Web-based Instruction for vocabulary and Iranian EFL learners' vocabulary knowledge.

### **3. Material and design**

#### *3.1 Participant*

300 freshmen students were selected randomly from whole students' population who registered for their first semester of study at Rodaki University of Tonekabon, Iran. The randomly selected students were given Oxford placement Test in order to achieve homogeneity in terms of their level of language proficiency. One hundred students gained the necessary requirements for the entrance into the experiment. Their age ranged from 18-25. The participants randomly assigned to two groups, namely experimental group (50 students) and a control group (50 students).

#### *3.2 Design*

A true-experimental, pre-test/post-test design was adopted for the purpose of this study comparing those who studied web-based vocabulary material with those who did not and used traditional methods.

### 3.3 Procedures

After achieving the necessary subjects for the purpose of study and assigning them randomly into two groups (experimental and control), both groups were pre-tested on the vocabulary knowledge test. During the 8-week implementation period, the experimental group received instruction through Web-based activities. However the control group was taught by skill based (traditional) approaches to vocabulary instruction. After the treatment both group post-tested on the same vocabulary knowledge test. Then the data collected through the study underwent the statistical analysis.

### 3.4 Material

1. An Oxford Placement Test (OPT) (Allan, 2004) for selection the subject of the study.
2. Vocabulary knowledge test developed by the current researcher as a pre-test and post-test of the study. The items were selected from the lexical items students were taught during the study. It has been validated against Nelson test. (validity=.85 and reliability=.92)
3. Sites: Studyzone (<http://web2.uvcs.ca/elc/studyzone>), Activities for ESL Students' (<http://a4esl.org>), and <http://www.manythings.org>

### 3.5 Statistical analysis

All data collected for this study were analyzed quantitatively and entered and analyzed using statistical package for social science (SPSS) Version 19. Descriptive statistics were summarized as mean and SD. Inferential statistics were also calculated through Independent sample T-test for investigating the effect of treatment.

## 4. Results

This section deals with statistical analyses (Descriptive and Inferential) were done to answer the following research question:

**Research Question:** Does Web-based Instruction for vocabulary enhance Iranian EFL learners' vocabulary knowledge?

**Null Hypothesis:** There is no relationship between Web-based Instruction for vocabulary and Iranian EFL learners' vocabulary knowledge.

In order to show the efficacy of the intervention, students' pre- and posttest scores on a researcher-made vocabulary test was analyzed to see if there was a statistically significant difference between the experimental group (EG) and control group (CG) in terms of vocabulary knowledge. Means and standard deviations for pre- and posttest scores can be found in Table 1. Despite the fact that the mean values of vocabulary test for the EG (M= 15) and the CG (15.10) prior to the instruction were almost the same, the experimental group outperformed the control group in the post-test. The mean value for vocabulary knowledge of the experimental group in the post-test (17.15) is higher than that of the control group (15.41).

**Table 1: Means and Std. Deviations of two groups**

Tests	Experimental group (30 students)		Control group (30 students)	
	Mean	Std. Deviation	Mean	Std. Deviation
Pre-test	15.00	1.98	15.10	1.73
Post-test	17.15	1.94	15.41	1.60

**Table 2: Independent Samples Test analysis of the post-test scores of experimental and control group of the study**

Levene's Test for Equality of Variances		t-test for Equality of Means							
F	Sig.	T	df	Sig. (2-tailed)	M. Difference	Std. Error Difference	95% Confidence Interval of the Difference		
							Upper	Lower	
Equal variances assumed	0.002	0.95	3.20	48	.641	1.007	.108	-5.56334	3.54763

To inferentially analyze the data, an independent sample t-test was conducted to show whether there is any difference in two groups' performance on the vocabulary knowledge test. The data summarized in Table 2. The findings indicate that the *t* ratio is 3.20. Therefore, the observed difference between means is unlikely due to chance because the observed difference is greater than the difference expected by chance (1 or less than 1). Then, Table of *t*-Values was consulted to see whether the observed ratio is large enough to reject the null hypothesis. To reject the null hypothesis at the significance level of .05 with 48 *degrees of freedom* for a two-tailed (*non-directional*) test, an observed *t* value greater than 2 (*t*-critical with *df* of 48 for a two-tailed test at the level of significance of .05) is needed. Thus, the observed ratio of 3.20 is greater than 2, which means that the difference between the groups is greater than the value required to reject the null hypothesis at the .05 level of significance. The null hypothesis is rejected and it can be stated that Web-based Instruction was effective for Iranian EFL learners' vocabulary knowledge.

## 5. Conclusion and Discussion

This study aimed at investigating the effect of Web-based Instruction of vocabulary on Iranian EFL learners' vocabulary knowledge. It was an attempt to put the study in an area of investigation that is still virgin. The study reached the conclusion that those who received instruction through technological mediation outstripped those who did not partook in WBI. That is to say, WBI was far more effective than traditional approaches to teaching vocabulary development. A number of issues can warrant attention as possible justifications for the final result of the study. According to Mahdavi (2013), language learning environment in Iran can be labeled as *input-poor* environment. EFL students in such environments lack sufficient practice largely due to lack of sufficient input. This study revealed that one way of affording students ample opportunity to practice the language is via the Internet. Perhaps WBI provided them a richer context for practice and learning than that of traditional methods to teaching vocabulary. It has also been suggested that the students who are learning language in input-poor contexts are of low motivation. It is possible to propose that the novelty of the new method of teaching vocabulary through online sessions will enhance the learners' motivation by capitalizing on their own role in learning process, engaging them actively in learning activities, and lowering the stress. Based on sociocultural theories of learning, a person will achieve self-regulation and internalize knowledge through a movement from object-regulation to other-regulation and finally self-regulation. Therefore, it can also be concluded that technological options set the scene for mediation of learning via objects which will finally end in self-regulation.

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