

THE EFFECT OF ASSISTED READING ON IMPROVING VOCABULARY KNOWLEDGE OF THE IRANIAN EFL LEARNERS

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ABSTRACT

Given the strong link between reading comprehension and vocabulary learning, this classroom-based study was designed to examine 1) the effect of assisted learning on vocabulary learning of Iranian EFL learners, 2) the progressive degree of vocabulary learning, and 3) the type of acquired vocabulary knowledge, i.e., whether it is receptive or productive. The participants were 62 language learners in two pre-TOEFL reading comprehension classes who were randomly assigned to the control and experimental groups. A reading comprehension and vocabulary test was administered at the beginning of the course which served as a pretest. Also, a total of 60 target words selected from their textbook were pretested using the Vocabulary Knowledge Scale (VKS) (Paribakht & Wesche, 1997). Then, the normal procedure of the reading classes which consisted of a series of pre-reading, during-reading, and post-reading practices was followed in the control group whereas the experimental group received both the normal procedure and the assisted reading treatment including 1) tape reading, 2) read-aloud, and 3) repeated reading. At the end of the course, a reading comprehension and vocabulary test was administered which served as a posttest and the VKS was post tested to observe which group had attained higher vocabulary gains. The results of the study were obtained by paired and independent T-Tests. Whereas the analysis of vocabulary gains within groups indicated that both groups had significant vocabulary gains in the posttests compared to their pretest, the analysis of the gains between groups showed no outperformance of the experimental over the control group. Analysis of the VKS showed that students acquired a very high percentage of new vocabulary; however, they mostly developed a receptive knowledge of the words than a productive knowledge. The proportion of the productive vocabulary knowledge was higher in the experimental group suggesting the positive effect of assisted reading on vocabulary gains.

Keywords: Assisted reading, Vocabulary acquisition, receptive and productive knowledge

INTRODUCTION

Most language instructors usually take vocabulary acquisition for granted and spends class time teaching the four basic language skills. It is believed that as language learners' progress in their language studies, their vocabulary range increases naturally as a result of in-class or out of class exposure to the target language. On the other hand, a group of language instructors or researchers have traditionally been trying to increase ESL/EFL learners' vocabulary command mostly through direct vocabulary instruction techniques (Ellis, 1995; Nation, 1993; Watanabe, 1997). In most EFL contexts, particularly in Asian countries like Iran, repetition and memorization of unknown words is the main type of vocabulary acquisition (Nation, 1982; Yang & Dai, 2011). Students read from a list of new words and their native language equivalents many times for retention. However, these types of rote learning and decontextualized vocabulary practices are not proved as being helpful and

students cannot recognize the words and their meanings unless they are presented within the same contexts (Cortazzi & Jin, 1994; Yang & Dai, 2011). Above all, the impact of reading on vocabulary learning has raised some concerns because studies addressing this issue have reported small vocabulary gains (Cho & Krashen, 1994). Thus, the effect of reading on vocabulary learning is still open to question.

On the other hand, literature shows that L2 research on assisted reading practices has been rare (Koda, 1994) but the limited literature available on this issue suggests that assisted reading techniques, though particularly aim at improving students' reading fluency, can enhance vocabulary acquisition. English reading comprehension textbooks have not been proved as being appropriate for developing vocabulary knowledge of the language learners because the purpose of reading is to assess students' comprehension of the text and the few vocabulary exercises included in the textbooks are not sufficient for the long-term retention of the new words and are not appropriate for assessment purposes. However, EFL learners require building a large vocabulary size to be able to read authentic texts of different subjects and be successful in their studies. Therefore, it is suggested that in EFL contexts where vocabulary gain is one of the main targets of reading comprehension practices, assisted reading techniques which can be implemented in class including tape reading, read-aloud and repeated reading are integrated, not merely to help gaining fluency in reading rather, to solve the problems related to vocabulary acquisition.

Due to the fact that rote repetition and retention of words and their equivalents in the EFL students' native language are still highly practiced in EFL contexts like Iran, it is vital to integrate more practical techniques which help EFL learners in the vocabulary learning mission. So, instead of reading a text or words on a rote basis, students can be engaged in assisted reading techniques which function as more feasible methods of vocabulary acquisition. So, it is important to investigate the effect of these techniques on vocabulary gains as well as the progressive degree by which new vocabulary is acquired by the language learner. A significant aspect of such investigations is to explore if the vocabulary acquired through these techniques is receptive or productive. These important issues in the area of vocabulary acquisition are the subjects of the present study.

BACKGROUND OF THE STUDY

Building vocabulary is of high importance because learning is considered as language-based, therefore, the larger the vocabulary size, the better learners can think about new concepts (Baker et al., 1998). The higher vocabulary knowledge allows students to modify their thoughts and expand their current knowledge. Vocabulary learning has a direct association with reading comprehension so that increase in L2 reading proficiency can be attributed to increased proficiency in vocabulary (Coady et al., 1993). In this regard, Koda (1994, p. 10) asserts that "Semantic processing is central to reading comprehension ... Ultimately, it is vocabulary that largely controls semantic processing". This quotation obviously shows the reciprocal nature of reading and vocabulary learning so, vocabulary is considered as an indispensable part of reading comprehension because learners mostly lag in reading when they frequently confront unknown words. Vocabulary learning can be attempted from two reading channels; assisted reading and unassisted reading. Assisted reading is primarily used in the context of reading classes with the purpose of assisting disadvantaged students to gain fluency in reading through techniques such as read aloud, repeated reading, paired reading and the like. But unassisted reading puts the responsibility of gaining fluency in reading on language learners' shoulders and lack the scaffolding techniques utilized in assisted reading pedagogy. According to Matsuoka and Hirsh (2010), "while unassisted reading of authentic texts may require up to 98% lexical coverage, it is assumed that the lower lexical threshold of

95% could enable assisted comprehension of ELT course books” (p. 57). Thus, it is suggested that integration of assisted reading techniques can help students to better comprehend the texts with less lexical coverage. At the same time, this can lead to vocabulary acquisition and word recognition. Besides, assisted reading techniques provide learners with more exposure to the text and thus more opportunities become available for vocabulary acquisition.

There are different types of assisted reading techniques suitable to be utilized in ESL/EFL classes. Tape reading and read-aloud are two forms of assisted reading that, though primarily utilized to improve the learners’ reading fluency, can lead to vocabulary gains and sight word recognition. Another principal element distinguishing assisted from unassisted reading is ‘repetition’. “Repeated reading, initially known as multiple oral reading, involves multiple, successive encounters with the same visual material, the key being repetition—whether of the same words, sentences, or connected discourse” (Han & Chen, 2010, p. 243). However, no definite number of repetitions of a word guarantees its acquisition.

When the emphasis is on vocabulary learning, assisted reading is delivered to promote learners’ vocabulary gains which are one of the main objectives of the reading comprehension courses. However, it has been shown that language learners do not reach at acceptable level of vocabulary after finishing such courses so they require more helpful techniques of vocabulary acquisition in EFL contexts. To be rewarding, the normal reading classes should be equipped with assisted reading techniques which facilitate vocabulary acquisition. These techniques give learners opportunity to practice words in their context of use (Thornbury, 2002), and during the period of time they spend in language classrooms. More specifically, when language learners listen, read-aloud, and repeat new vocabularies, they use several senses at once and this facilitates comprehending and recognizing words faster, so the acquired vocabulary becomes harder to decay. That is why assisted reading techniques have an important role to play in vocabulary acquisition. Moreover, through these techniques, from the first encounter with the new words, learners are introduced to the right pronunciation of them and associate the pronunciations with their sights, and consequently to their meaning; this eventually makes word learning and recognition easier.

To date, few studies have dealt with the effect of assisted reading, namely, tape reading, read-aloud and repeated reading on vocabulary learning of the Iranian EFL students compared to vocabulary learning in unassisted environment. Accordingly, the current study is designed to address this important issue in an attempt to understand what constitutes a more favorable condition for vocabulary learning. The study employs the Iranian version of Vocabulary Knowledge Scale to assess the degree of learners’ knowledge of 60 target words. The word knowledge is further assessed in terms of receptive and productive dichotomy.

Assisted Reading and Vocabulary Learning

Tape Reading

Tape reading has recently been receiving more attention from language teachers and researchers. In tape assisted reading, an individual or the whole class read along in their books while simultaneously listening to an audio recording of the passage read by a fluent speaker. Although this technique primarily aims at building students’ confidence so they can read fluently without the help of the tape, it helps them improve sight word recognition. This technique is also called “reading while listening” because students read the text as they listen to an audio-taped model of it. Some studies have addressed this issue. Shany and Biemiller (1995), conducted a massive “assisted reading” program. A comparison was made two treatment and experimental groups. The experimental group received the treatment which consisted of assisted reading for half an hour per day during a sixteen-week period. The

treatment students received was of two types: live or taped assistance with word recognition. The results of their study showed that both assisted reading types were effective in developing reading comprehension. Brown et al. (2008) examined the rate at which English vocabulary was acquired in three modes of reading, reading-while-listening, and listening to stories. They found that new words could be learned incidentally in all the modes, but the more frequent words in the text were more likely to be learned and retained.

Read-Aloud

As mentioned in the previous section, tape reading as a helpful assisted reading technique consequently results in confidence in reading aloud. Reading aloud, another form of assisted reading, makes memorizing and recognizing words faster, easier, and longer-lasting. Santoro et al. (2005) believe that read-aloud provides opportunities for teaching vocabulary by providing an ideal “teacher-centered” approach for discussing about new words. Many studies have been conducted to determine the benefits of reading aloud to students’ learning and retaining new words. In a leading study by Elley (1989), it was shown that the students who were deficient in vocabulary knowledge made significant gains via read-aloud instruction. He further emphasized that to enable children derive new word meaning from context, a persistent attention should be made to the meaning of the stories. However, Senechal (1993) did not find any positive impact of read-aloud on vocabulary acquisition due to the very young age of children in her study. He concluded that explanations of words to older children may boost vocabulary acquisition. In a quasi-experimental study, Galligane (2009) evaluated the effectiveness of a structured, comprehensive framework for pre-school vocabulary instruction using different research-supported strategies during storybook read-aloud sessions. The results of her study proved instructional intervention as an effective way of teaching targeted vocabulary words to the pre-school students. It was also indicated that both the short-term and long-term instruction were effective with a long-term instruction leading to more vocabulary gains.

Repeated Reading

Repeated reading “initially known as multiple oral reading, involves multiple, successive encounters with the same visual material, the key being repetition—whether of the same words, sentences, or connected discourse” (Han & Chen, 2010, p. 243). Repeated reading is particularly important because it facilitates reading fluency. Researchers recognize difficulty in word recognition as a major obstacle to fluent reading which causes slow decoding, and its act as a “bottleneck” which impedes comprehension of the text (LaBerge & Samuels, 1974). But, as far as vocabulary learning is concerned, most researchers suggest that repeated reading in a connected discourse is more productive than repeating isolated words such as repeated reading of a word list (Fleisher et al., 1979; Samuel, 1979). Research on the effect of vocabulary repetition, as a form of assisted reading has focused on different variables including the number of repetitions, repetition types, and the repetition intervals but the findings have been conflicting (Nation & Wang, 1999; Webb, 2009). Of course, some researchers strongly attack this view and support the role of context in vocabulary learning. They believe that vocabulary learning should not be restricted to the rote repetition of a list of words, rather vocabulary should be learnt in its own contexts as most of the words have more than one meaning and students may apply the very first meaning of a word in quite different contexts and this hinders their understanding. Besides, context provides some contextual clues which facilitates guessing or learning the meaning of unknown words (Beck et al., 1983; Rott, 1999). Several studies have addressed the related issues some of which are reviewed below.

Taguchi (1997) conducted repeated readings to a class containing 15 students in a university in Japan. The participants were required to practice repeated readings from English textbooks that matched their reading levels over a ten-week period, for a total of 28 sessions of 30 minutes. In each session, they read a passage seven times with the first time unassisted, the next three times assisted by an audiotaped model of the passage, and the last three times again unassisted. The first and the last readings served as pretest and posttest. Results of their study showed that the repeated readings assisted by an audio-taped model of reading significantly improved students' silent reading rates whereas the three more unassisted repeated readings which provided no model of reading for the students, significantly increased their silent reading rates. Repeated readings also developed word recognition skills of (foreign language) readers within practiced passages.

Another main study done in L2 context was carried out by Han and Chen (2010) who implemented a set of repeated-reading-based pedagogical and learning procedures to assess vocabulary gains over a three-week period (20 sessions). They concluded that assisted repeated reading led to both intentional and incidental vocabulary gains that would not otherwise have been possible through conventional reading or vocabulary instruction. In a successive study, Shany and Biemiller (2010) focused their attention on vocabulary learning. Actually, they analyzed the results of their previous study (Shany & Biemiller, 1995) to see the correlation between reading comprehension and vocabulary and also gains in reading comprehension and vocabulary as a result of extended assisted reading. They contrasted two groups of students; the first group consisted of 14 children below the mean and the second groups were 15 children above the mean in reading comprehension. The results showed that although there was no significant correlation between reading measures and reading comprehension gains, children with reading comprehension above the mean had a significantly larger gain in vocabulary. It was concluded that higher reading comprehension results in higher vocabulary gain.

OBJECTIVES

The review of literature shows that assisted reading techniques are mainly incorporated in pre-school and school contexts with the chief purpose of assisting them to read fluently but a few of these studies have investigated the effect of such assisted reading techniques on vocabulary learning among language learners. The findings of the reviewed studies suggest the need to incorporate assisted reading techniques in reading programs to facilitate vocabulary learning. However, these findings cannot be generalized to adult students at more advanced levels. Taken together, as all of the reviewed studies, have more or less, pointed to the positive effect of assisted reading on vocabulary learning, it is worthwhile to further study this issue. Given the above discussion, this study seeks answer to the following research question:

1. Does assisted reading have any effect on vocabulary acquisition of the Iranian EFL learners?
2. What is the progressive degree of vocabulary learning of the Iranian EFL students as a result of assisted reading instruction?
3. Is the vocabulary knowledge acquired as a result of assisted reading instruction receptive or productive?

SIGNIFICANCE OF THE STUDY

The present study is significant in the sense that:

1. First, to the best of the authors' knowledge, no studies have systematically investigated the effect of assisted reading on vocabulary learning of the Iranian EFL students at upper-intermediate level. So, the results obtained by this study are of high value and inspire other researchers to examine this important area of study.
2. Second, it shows the degree to which either of unassisted reading of textbooks (e.g., reading comprehension books) and assisted reading through tape reading, read-aloud, and repetition are successful in enhancing students' vocabulary gains.
3. Third, most of the studies done within the area of assisted reading have resorted to techniques which primarily boost learners' reading fluency among young children. However, the present study employs more advantageous forms of assisted reading namely, tape reading, read-aloud and repeated reading, to enhance vocabulary learning among upper-intermediate Iranian EFL students.
4. Finally, the present study not only addresses the degree of vocabulary gains but also the type of vocabulary knowledge, receptive and productive, which is of high value.

METHODOLOGY

Participants and Material

This study was implemented in an intensive summer session Pre-TOEFL course offered at English department of one of the major academic centers in Shiraz, Iran. The study included 90 students. They were pretested and 62 homogeneous students were selected as the participants of the study. They were male and female upper-intermediate language learners who were randomly placed in two classes, each containing 31 students. All of the language learners were native speakers of Farsi and within 19-23 years of age. They had studied English for at least two years in the same or different academic centers before taking this course.

The pre-TOEFL intensive course was held three times per week and each session lasted for 30 minutes over a ten-week period. The second session of each week was devoted to reading comprehension whereas the focus of the two other sessions of the week was the other language skills such as speaking and writing. Select Reading 4 (Bernard & Lee, 2004) written for upper-intermediate language learners was taught as the major material of this course. Both classes were taught by the same female instructor with 6 years of teaching experience at this academic center.

Instruments

At first, a reading comprehension and vocabulary test was administered with the purpose of homogenizing students and electing the participants of the study. This 60-item multiple-choice study also served as the pretest, the results of which were compared to those of the posttest to determine the degree to which students had improvement in vocabulary learning.

To answer the first research question, a 60-item multiple-choice reading comprehension and vocabulary test, designed by the researcher from the textbook, was administered as the posttest which specifically measured the learners' vocabulary knowledge of the 60 target words after the instruction.

To provide answer to the second research question, that is, measuring the progressive degree of vocabulary acquisition, the Vocabulary Knowledge Scale (VKS) developed by Paribakht & Wesche (1997) (Table 1) is administered to the students both prior to and after the instruction. The purpose for selecting this scale is that it can be used "to capture the initial stages or levels in word learning which are subject to self-report or efficient demonstration,

and which are precise enough to reflect gains during a relatively brief instructional period” (Paribakht & Wesche, 1997, p. 27). This 5-point scale reflects the progressive nature of vocabulary learning and the degrees of knowledge learners possibly possess. It also measures learners’ receptive and productive knowledge of a specific word. In this case, the 60 selected target words. Items I and II only check if the word and its meaning is familiar and/or known to the language learner. Items III and IV are receptive because they assess the learner’s recognition of a given word. Item V is productive because it requires the learner to use the word in a sentence and assesses its application.

The self-analysis VKS was scored based on the following criteria (Paribakht & Wesche, 1997):

Table 1. The VKS Scoring Categories

	<i>Points</i>
The word is unknown / unfamiliar.	1
The word is familiar but it’s meaning is unknown.	2
The correct synonym or explanation of the word is given.	3
The word is used with semantic appropriateness in a sentence.	4
The word is used with semantic appropriateness and grammatical accuracy in a sentence.	5

To maintain reliability of scoring and to minimize the rater bias, the VKS reports were scored both by the researcher and another professional rater based on the criteria explained above and the interrater reliability was 0.98.

To answer the third research question, i.e., to see if the acquired knowledge of vocabulary is receptive or productive, the frequency and percentage of the known words which was further divided to receptive and productive categories were computed.

Study Design and Data Collection Procedure

The participants homogenized by a reading comprehension and vocabulary test administered at the beginning of the term were randomly assigned to the control and the experimental groups. The test also served as a pretest. Then, a total of 60 lexical items from the first 10 lessons of the textbook, that is, 6 new words from each lesson were selected as target words and pretested by the Iranian version of Vocabulary Knowledge Scale (Paribakht & Wesche, 1997) in both classes to measure the learners’ knowledge of these words and to see how much they were unknown to the students before the instruction. These words were selected based on three criteria explained by Sonoto et al. (2008, p. 402): they are 1. Functional and meaningful, 2. Rich, varied, and interesting without comprising the text’s overall meaning, 3. Important to understanding the text.

Students in the control group received the normal procedure of the reading classes. On each reading session, the language learners read a reading, and the pre-reading, during-reading, and post-reading procedure is followed for each chapter of the book. The new words were explained and paraphrased. Students answered the follow-up questions or exercises on the same and the following reading comprehension sessions. On the other hand, learners in the experimental group, although studying the similar book and do the same exercises, received the assisted reading treatment which was integrated in the reading comprehension class. Three main assisted reading techniques employed were: 1) tape reading, 2) read-aloud, and 3)

repeated reading. Whereas silent reading of the new lesson was practiced in the control group, learners in the experimental group followed the following procedure:

- a. They listen to the audio recording of the reading which is slightly above their independent reading level.
- b. As they listen to the tape, they follow along on the paper copy of the reading and read silently. This helps them to become familiar with the pronunciation and sight of the new words.
- c. The instructor then asks some questions to check their comprehension. After that, she makes each learner to read aloud a few lines of the text. They read the text aloud without the audio.
- d. The learners re-read the text containing unknown words several times until they feel comfortable reading it unassisted. When the students have difficulty pronouncing or figuring out the meaning of a new word, the instructor makes them repeat the word several times and explains the meaning. Learners who know the meanings are encouraged to explain the meaning to the class. It is important to note that repeated reading or re-reading the text can be a boring task specifically for adult learners at more advanced levels so, the learners only re-read the sentences that they lag difficulty reading and understanding them. Such sentences most often include the new vocabularies.
- e. The learners are encouraged to listen to the audio recording of the text at home.

At the end of the course, a reading comprehension and vocabulary test was administered as the posttest and the VKS was post-tested specifically to measure the learners' vocabulary knowledge of the 60 target words and to determine if the acquired vocabulary knowledge is receptive or productive.

Data Analysis Procedure

The study used descriptive statistics to analyze the data. To answer the first research question, the scores of pretest and posttest reading comprehension and vocabulary tests, administered at the beginning and the end of the course were calculated and compared both within and between groups using paired and independent T-Test. To answer the second research question, the mean difference of the scores obtained from the VKS in pretest and posttest determined to what degree both groups had acquired vocabulary. Finally, to answer the third research question, the frequency and percentage of the components of the VKS were computed to determine the type of vocabulary knowledge acquired after the instructional period.

RESULTS AND DISCUSSION

The descriptive statistics of the pretest and posttest of the reading comprehension in both groups are reported in Table 1.

Table 1. Descriptive Statistics of the Pre-test & Post-test of Reading Comprehension & Vocabulary Test Scores for the Control and Experimental Groups

<i>Group</i>		<i>N</i>	<i>Mean</i>	<i>SD</i>
Control	Pre-test	31	14.01	2.80
	Post-test	31	15.56	2.14
Experimental	Pre-test	31	14.50	2.67
	Post-test	31	16.43	2.19

As shown in Table 1, both the control and experimental groups had the same mean in the pretest (14.01 vs. 14.50) showing that they were at the same level of proficiency at the beginning of the course. But, the mean of the experimental group was higher in the posttest, after the instruction, compared to the control group (16.43 vs. 15.56) suggesting that the experimental group outperformed the control group in the posttest.

To answer the first research question, i.e., the effect of assisted reading techniques on Iranian EFL students' vocabulary gains, two paired t-test were run. Table 2 indicates the result of within group comparison of vocabulary gains. As can be seen, the mean difference (MD) between the pretest and posttest of the control group (MD = -1.54) is significant at $p < .05$. Similarly, the mean difference between the pretest and posttest of the experimental group (MD = -1.93) is significant at $p < .05$. This indicates that students in both groups made vocabulary gains after the instructional period. However, the experimental group which received assistant reading treatment made more gains than did the control group.

Table 2. Comparison of Vocabulary Gains within Groups

<i>Group</i>		<i>Mean</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i>
Control	Pretest – Post-test	-1.54	1.260	-6.839	.000*
Experimental	Pretest – Post-test	-1.93	2.574	-4.185	.000*

* $p < 0.05$

A comparison of gains was also made between groups as presented in Table 3. It can be seen that the mean difference between pretest scores of the control and experimental groups was not significant (MD = -1.54). This shows that both groups were at the same level of proficiency before the instruction. Likewise, the mean difference between both groups was not significant in the posttest (MD = -1.93) indicating that the instructional group did not outperform the control group. Although the mean difference was not significant, the mean of the experimental group was higher than that of the control group (16.43 vs. 15.56).

Table 3. Comparison of Vocabulary Gains between Groups

<i>Group</i>		<i>Mean Difference</i>	<i>SD</i>	<i>t</i>	<i>Sig.</i>
Control - Experimental	Pre-test	-.48387	.69580	-.695	.489*
Control - Experimental	Post-test	-.87097	.55138	-1.580	.119*

* $p < 0.05$

To answer the second research question, the scores of the VKS scale were subjected to descriptive statistics the result of which is shown in Table 4.

Table 4. Descriptive Statistics of the Pretest & Posttest of VKS Scale for the Control and Experimental Groups

<i>Group</i>		<i>N</i>	<i>Mean</i>	<i>SD</i>
Control	Pre-test	31	93.67	14.44
	Post-test	31	170.03	31.47
Experimental	Pre-test	31	91.74	14.58
	Post-test	31	224.90	34.85

As can be seen, both the control and experimental groups had, more or less, the same mean in the pretest (93.67 vs. 91.74) showing that they were at the same level of vocabulary knowledge at the beginning of the course. But, the mean of the experimental group was much higher in the posttest, after the instruction, compared to the control group (170.03 vs. 224.90) suggesting that the experimental group achieved more vocabulary gains in the posttest than did the control group. Table 5 shows the within group comparison of vocabulary knowledge based on VKS scale.

Table 5. Comparison of Vocabulary Knowledge (VKS scale) within Groups

Group		Mean Difference	SD	t	Sig.
Control	Pretest - Posttest	-76.35	36.88	-11.527	.000*
Experimental	Pretest - Posttest	-133.16	36.42	-20.354	.000*

*p < 0.05

As can be seen, students' vocabulary knowledge in both groups increased in the posttest. The mean difference between the pretest and posttest of the VKS scale in the control group was significant (MD = -76.35) at p > 0.05. Similar results achieved for the experimental group (MD = -133.16). However, the mean differences show that experimental group had a higher increase in vocabulary knowledge than the control group. A comparison was also made between groups the result of which is shown in Table 6.

Table 6. Comparison of Vocabulary Knowledge (VKS scale) between Groups

Group		Mean	SD	t	Sig.
Control - Experimental	Pretest	-.48387	.69580	-.695	.489*
Control - Experimental	Posttest	-.87097	.55138	-1.580	.119*

*p < 0.05

The mean difference between pretest scores of VKS scale in the control and experimental groups was not significant (MD = -.48387). This shows that both groups had the same vocabulary knowledge before the instruction. Likewise, the mean difference between both groups was not significant in the posttest (MD = -.87097). Although the mean difference of the groups in the pretest and posttest was not significant, the mean of the experimental group was higher than that of the control group (16.43 vs. 15.56) suggesting more gains in vocabulary knowledge.

To answer the third research question, in other words, to fully understand the effect of instructional treatment according to the VKS scoring measure, category I and II of the scale (not having seen a target word and having seen it but not known its meaning) were classified as unknown words whereas the three remaining categories (III, IV & V) were classified as known words (Table 7).

Table 7. Percentages of Unknown and Known Words of VKS Scale within and Between Groups

Group		Vocabulary	
		Unknown (I & II)	Known (III, IV & V)
Control	Pre-test	1793 (96.39%)	67 (3.61%)
	Post-test	277 (14.90%)	1583 (85.1%)
Experiment	Pre-test	1812 (97.41%)	48 (2.59%)
	Post-test	175 (9.40%)	1685 (90.59%)

As shown in Table 6, there was a significant increase in known words for both groups. Although the majority of the words were unknown to the students in the control and experimental group (96.39% & 97.41%, respectively) at the beginning of the course, after the instructional period, both groups showed a remarkable increase in word knowledge so that the majority of the unknown words had become known to the students in the control and experimental group in the posttest (85.1% & 90.59%, respectively). However, the larger gain observed in the experimental group can be attributed to the extra practice they received in form of assisted reading techniques which helped them to learn more words. Although the results of VKS scale pretest and posttest points to significant vocabulary gains, it is also important to know which form of vocabulary knowledge, receptive or productive, increased after the instructional period. To address this issue, the categories III and IV (giving a correct synonym or translation and using a word with semantic appropriateness in a sentence) were placed under the class of “receptive” knowledge and category V (using a word with semantic appropriateness and grammar accuracy in a sentence) fell under the class of “productive” knowledge. Table 8 shows the frequency and percentage of receptive and productive words within and between groups.

Table 8. Percentages of Receptive and Productive Words of VKS Scale within and between Groups

<i>Group</i>		<i>Vocabulary Knowledge</i>	
		<i>Receptive (III & IV)</i>	<i>Productive (V)</i>
Control	Pre-test	61 (3.27%)	6 (0.33%)
	Post-test	1514 (81.39%)	69 (3.70%)
Experiment	Pre-test	40 (2.16%)	8 (0.43%)
	Post-test	1372 (73.75%)	313 (16.82%)

Table 7 shows that although the proportion of known word was so low and the word knowledge of known words was mostly receptive in the pretest of both control and experimental group (3.27% & 2.16%, respectively), a significant increase occurred in the frequency and percentage of known word in both groups in the pretest. However, similar to pretest, most of the known words fell in the category of receptive words in the control and experimental groups (81.39% & 73.75%, respectively). However, as far as productive knowledge is concerned, the increase was higher in the experimental than the control group (3.70% vs. 16.82%) suggesting that the assisted reading treatment the experimental group received resulted in more in-depth vocabulary learning by teaching students how to use the vocabulary than simply understanding its meaning.

Generally, the results of this study and the higher vocabulary gains observed in the experimental group are supported by the previous research which points to the positive effect of assisted reading on vocabulary acquisition (Elley, 1989; Galligane, 2009; Han & Chen, 2010; Shany & Biemiller, 1995). Although the control group also made significant gains, the attained vocabulary knowledge was more receptive than productive. This suggests that both assisted and unassisted reading results in vocabulary learning but the vocabulary acquired by unassisted reading is mostly receptive and limited to understanding the meaning of the word. On the other hand, more emphasis on vocabulary via assisted reading techniques leads to better comprehension and also the ability to use the word with semantic and grammatical accuracy.

CONCLUSION

The purpose of this study was to observe the effectiveness of assisted reading on vocabulary learning of the Iranian EFL learners using pretest-posttest procedure, the degree of vocabulary acquisition and the type of vocabulary knowledge attained as a result of this instruction. The results showed that while unassisted reading may mainly lead to receptive knowledge of vocabulary, incorporating assisted reading techniques results in more productive knowledge of vocabulary. So, it is more likely that productive knowledge of vocabulary is more subjected to retention whereas the receptive knowledge of vocabulary is easier to decay. These findings have practical implication for EFL vocabulary instruction and inspire language instructors to integrate assisted reading strategies to their classrooms to assist language learners to build vocabulary. However, the study has some limitations. The classes selected for this experiment is mixed so future studies can investigate this issue in male and female classes to see if their findings are consistent with those of this study. As it is one of the first studies exploring the effect of assisted reading techniques on vocabulary learning among adult learners, more studies need to be carried out to support the present findings or add more useful knowledge to this area of study.

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