

The Effects of Word-Map Technique on Iranian EFL Learners' Vocabulary Acquisition: A Response to Help-seeking Strategy (A Study in Azad University, Malayer, Iran)

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Abstract – The purpose of the present study was to investigate the effects of word-maps technique on learners' vocabulary acquisition as a response to help-seeking strategy. To this purpose, two intact groups (each composed of 15 learners) were chosen. They had a mean age of 16. They were divided into two groups, an experimental group and a control group. Some written texts were taught to both groups. Unfamiliar words in texts were taught to the experimental group through word-maps instruction while the control group received guessing-game instructions. The results of the posttest in data analysis through statistical procedure of Independent pair T-test confirmed the superiority of the experimental group over the control group, resulting in the conclusion that word-maps technique has a significant effect on improving Iranian EFL learners' vocabulary. The findings support the arguments regarding the importance of word-maps instruction in vocabulary learning. The researchers suggest other teachers and researchers applying this approach in their instruction in order to reduce linguistic and cognitive complexity of texts.

Keywords: word maps, vocabulary acquisition, help-seeking strategy

I. INTRODUCTION

Vocabulary has been object of numerous studies as a major component of the language learning each of which has its own contribution to this field. Vocabulary learning is an intrinsic part of language teaching. A number of researchers agree that the most effective way of teaching vocabulary is still unknown. Vocabulary was often given little priority in language program and often left behind and received only occasional attention in textbooks and language programs (Richard & Renandya, 2002). At one time it was widely assumed that lexical instruction is not essential as it can happen by itself, therefore the teaching of vocabulary was not popular (Nation, 1990). But today, importance of vocabulary and its significance in learning a language have been accepted. Therefore, the researchers applied a new technique, i.e., the word-map strategy, in order to find its effects on learners' vocabulary repertoire.

II. LITERATURE REVIEW

A. Importance of vocabulary teaching

One of the most important challenges that learners will face during the process of second language learning is learning vocabulary. Laufer (1997) argues that vocabulary learning is at the heart of language learning and language use. In fact it is what makes the essence of a language. Vocabulary has been recognized as crucial to language use in which insufficient vocabulary knowledge of the learners led to difficulties in second language learning. Thus, in the case of learning the vocabulary in second language, students need to be educated with vocabulary learning strategies. The aim of this study was to increase the students' vocabulary by using word maps technique as a model to boost vocabulary learning as a response to help-seeking strategy.

B. Help-seeking Strategy and Its Model

Help-seeking strategy is a self-regulative strategy that learner must carry out through social interaction with others. The learners participate in regulating their own learning by obtaining assistance of others. Seeking help from others is a commonly adaptive strategy to cope with challenges when encountering obstacles in a learning task (Karabenick, 1998). It comprises the following steps: 1. Becoming aware of need for help, 2. Deciding to seek help, 3. Identifying potential helper(s), 4. Using strategies to elicit help, and 5. Evaluating help-seeking episode.

C. Patterns of Help-seeking Behavior in Learning

Two forms of seeking help are distinguished: avoidant help-seeking and adaptive/strategic help-seeking. Avoidant help seeking refers to instances that a learner avoids asking for help even when he is aware of the need. The learner might choose to give up finding out the answer of a problem or guess an inappropriate answer rather than turn to others' help. Then, they may put themselves in embarrassment and achieve little in learning. Compared with adaptive/strategic help seekers, avoidant help-seekers obviously have lower academic efficacy, less adaptability, more anxiety, and poorer performance in learning (Karabenick & Knapp, 1991; Nelson Le-Gall, 1981; Newman, 1994). In contrast, adaptive help seekers actively look for hints about the solution to their problem, or clarification of the ambiguity. They not only find the answers they requested but also develop the ability to overcome obstacles independently and eventually become autonomous learners. Strategic/adaptive learners are more motivated and more confident in learning. They have higher mastery approach achievement goal levels and academic performance (Ryan & Pintrich, 1997).

D. Effective Strategies for Teaching Vocabulary

Because vocabulary knowledge is critical to reading comprehension, it is important that those working with young readers help foster their development of a large "word bank" and

effective vocabulary learning strategies. There are several effective explicit (intentional, planned instruction) and implicit (spontaneous instruction as a child comes to new words in a text) strategies that adults can employ with readers of any age

E. Explicit Vocabulary Instruction

1. Pre-teaching vocabulary words. One of the most effective methods of helping children learn new vocabulary words is to teach unfamiliar words used in a text prior to the reading experience. Learners should preview reading materials to determine which words are unfamiliar. Then these words should be defined and discussed. It is important for the teachers or researchers to not only tell the learners what the word means, but also to discuss its meaning. This allows the learners to develop an understanding of the word's connotations as well as its denotation. Also, discussion provides the teachers or researchers with feedback about how well the learners understand the word. After pre-teaching vocabulary words, the learners should read the text.

2. Repeated exposure to words. It may seem common sense that the more times we are exposed to a word, the stronger our understanding becomes. However, repeated exposure to new vocabulary words is often ignored. Adults often forget a person (especially a child) needs to hear and use a word several times before it truly becomes a part of her vocabulary. Providing multiple opportunities to use a new word in its written and spoken form helps children solidify their understanding of it.

3. Keyword method. Like pre-teaching, the keyword method occurs before a child reads a particular text. In this method, unfamiliar words are introduced prior to reading. However, rather than encouraging the learners to remember a definition for a new word, the teacher teaches learners "word clues" to help them understand the words. This "words clues" or keywords might be a part of the definition, an illustrative example or an image that the reader connects to the words to make them easier to remember the meaning when reading the words in context. The idea behind the keyword method is to create an easy cognitive link to the word's meaning that the reader can access efficiently during a reading experience.

4. Word maps. The word map is an excellent method for scaffolding a child's vocabulary learning. Like the other explicit instructional methods, the teacher (either alone or with the learners) should preview reading materials to determine which words are unfamiliar. For each of these new vocabulary words the child (with the support of the adult) creates a graphic organizer for the word. At the top or center of the organizer is the vocabulary word. Branching off of the word are three categories: classification (what class or group does the word belong to), qualities (what is the word like) and examples. Using prior knowledge the child fills in each of these three categories. The researchers utilized this strategy in order to tap learners' help-seeking strategies.

5. Root analysis. While root analysis is taught explicitly, the ultimate goal is for readers to use this strategy independently. Many of the words in the English language are derived from Latin or Greek roots. They either contain a "core" root (the primary component of the word) or use prefixes or suffixes that hold meaning. Adults should focus on teaching children the

most commonly occurring roots, prefixes and suffixes. As each is taught examples of its use in common word should be shared and examined. The reader should see how the root helps her understand the word's definition. Learners should then be given practice analyzing words to determine their roots and definitions. When a learner is able to break down unfamiliar words into their prefixes, suffixes and roots they can begin to determine their meanings.

6. Restructuring reading materials. This strategy is particularly effective for helping struggling readers improve their vocabularies. Sometimes grade level materials are inaccessible to readers because there are too many unfamiliar words in them. Adults can restructure the materials in several different ways to help readers comprehend them more easily. A portion of the difficult words can be replaced with "easier" synonyms to help the reader understand the overall text. Vocabulary footnotes (definitions provided at the bottom of the page) can be added for particularly challenging words so that the reader can easily "look up" the word while still reading the text. An accompanying vocabulary guide can be provided for the text. Words that are included in the guide should be highlighted or printed in bold text to direct the reader to check the vocabulary guide if the word or its meaning is unfamiliar

F. Implicit Vocabulary Instruction

1. Incidental learning. Incidental vocabulary learning occurs all of the time when we read. Based on the way a word is used in a text we are able to determine its meaning. While you may not know what a specific word means, many times you can determine its meaning based on what the rest of the sentence focuses on. Teachers or researchers should model this sort of incidental vocabulary learning for learners to help them develop their own skills.

2. Context skills. Context skills are the strategies that a reader uses for incidental vocabulary learning. Texts are full of "clues" about the meanings of words. Other words in a sentence or paragraph, captions, illustrations and titles provide readers with information about the text that they can use to determine the meanings of unfamiliar words. These features are often referred to as "context clues" because they are contained within the context of the piece of writing rather than outside it. Young readers should be taught to find and use context clues for learning new vocabulary words.

III. Method

A. Research question

The present study aimed to answer the following question: *Does a word-map technique have any significant effects on students' vocabulary acquisition?*

Regarding the research question a hypothesis was made. **H.** *Word-map technique does not have any significant effects on students' vocabulary acquisition?*

B. Participants

The participants in this study were 30 intermediate female teenagers. They were intermediate students, in Daneshyaran Kochak Institute in Arak, Iran. The participants had a mean age of 16 and had been studying English for 8 semesters in Daneshyaran Kochak institute. Both groups were randomly selected from 7 intact classes consisting of 105 students. The treatment lasted for two month, two days a week, 70 minutes a day in the institute.

C. Instruments

Three instruments were utilized to achieve the purpose of the study: Oxford placement test. The Oxford Placement Test measures a test taker's ability to communicate in English. It provides information about a person's language level. This test is comprised of 60-items. The test is reliable (consistently grading test takers at the right level) and valid (having a strong theoretical basis). Parallel vocabulary tests (as pre-test and post-test of the study) were administered. Parallel tests are the ones which measure the same construct and have the same mean and standard deviation (Bachman, 1990, P.168)

D. Procedure

In sum, the present study was a quantitative research and a quasi-experimental design, because the researchers selected intact classes randomly but they did not give random assignment to each individual. After selecting the whole population (N=105), a pre-test to assess their initial knowledge in vocabulary was administered.

Based on the result of this test, the participants (the two groups) whose scores were one standard deviation above or below the population mean were selected as target subjects for the study. Then the two groups were randomly assigned to the control group and the experimental group of the study. Both groups were given reading comprehension texts in order to read the text or to answer the comprehension questions. In the control group, the researchers wanted learners to guess the meaning of unfamiliar words from the text or they provide the translation of the unfamiliar words as a last resort.

In contrast, the researchers applied word-map technique for the experimental group. The word-map strategy is an excellent method for scaffolding a child's vocabulary learning. Like the other explicit instructional methods, the learner should preview reading materials to determine which words are unfamiliar. For each of these new vocabulary words the child (with the support of the adult) creates a graphic organizer for the word. At the top or center of the organizer is the vocabulary word. Branching off of the word are three categories: classification (what class or group does the word belong to), qualities (what is the word like) and examples. Using prior knowledge the child fills in each of these three categories. Word maps help readers develop complete understandings of words.

IV. RESULTS

The present study was an attempt to investigate the effect of Word-map technique on Iranian EFL learners' vocabulary acquisition. To fulfill the purpose of the study, both descriptive and inferential statistics were used.

As mentioned above, 105 learners participated in this study. The participants were female studying English at Daneshyaran Kochak Institute in Arak, Iran.

Table 1. Descriptive Statistics for two groups in Oxford placement test

	N	Range	Minimum	Maximum	Mean	Std. Deviation
placement	105	35.00	19.00	54.00	33.6952	8.17492
Valid N (listwise)	105					

All the data including mean, maximum score, minimum score, range, and so on were shown in Table 1.

A. Independent Sample T-Test as the Pre-Test

First of all it is worth noting that Independent Pair t-test is used to determine whether there is a significant difference between the means of two independent groups or not. Since there were two groups in the present study, the researcher used Independent Pair t-test to compare the means of different groups.

Table 2. Descriptive Statistics for two groups in Pre-test (vocabulary)

	N	Minimum	Maximum	Mean	Std. Deviation
control	15	7.00	14.00	11.2667	1.70992
experiment	15	7.00	14.00	11.1333	2.29492
Valid N (listwise)	15				

Table 2 provides useful descriptive statistics for two groups. The data include the mean, the standard deviation, minimum and maximum scores.

Table 3. Independent Samples Test in pre-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
input	Equal variances assumed	2.30	.140	.180	28	.858	.13333	.7389	-1.380	1.646
	Equal variances not assumed			.180	25.8	.858	.1333	.7389	-1.385	1.652

Table 3 indicates the output of the Independent Pair t-test analysis and whether there is any significant difference between the means of two independent groups. As can be seen in this table the significance level is 0.85(p=.85) which is above 0.05, therefore, there is statistically no significant differences between the groups at the beginning of the study.

Table 4. Descriptive Statistics for two groups in Post-test (vocabulary)

	N	Range	Minimum	Maximum	Mean	Std. Deviation
control	15	4.00	10.00	14.00	12.13	1.12546
experiment	15	5.00	13.00	18.00	15.26	1.79151
Valid N (listwise)	15					

All data regarding, mean, standard deviation, minimum and maximum scores are provided in table 4.

Table 5. Independent Samples Test in post-test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
input	Equal variances assumed	5.5	.026	-5.73	28	.000	-3.13333	.54627	-4.252	-2.0143
	Equal variances not assumed			-5.73	23.56	.000	-3.13333	.54627	-4.261	-2.0047

Table 5 indicates the output of the Independent Pair t-test analysis and whether there is any significant difference between the means of two independent groups or not. As can be seen in this table the significance level is 0.00 ($p=0.00$) which is below 0.05, therefore, there is statistically significant differences between two groups, that is, the null hypothesis could be rejected. It means that word-map technique was effective.

V. CONCLUSION

Learners always seek help from people around them when what they encounter in learning which are beyond the explanation of their current knowledge. Seeking help from others allows them to get targeted information exactly when they need it. Compared with other ways of learning, getting help from others is more convenient and less time-consuming. So it is important to instruct help-seeking strategy to learners. The present study was motivated by instructing word-map technique for the learners to learn more. The main aim of this study was to explore whether word map technique could positively affect vocabulary learning in learners.

Using pre-test and post test scores on vocabulary test, Independent Pair t-test was used to analyze the data obtained from the study. Results displayed an increase in students' performance in vocabulary learning due to the effect of word-map strategy. The conclusion that might be made from the above statistics analysis was that the participants who were taught based on this strategy generally tended to score higher in the vocabulary test.

Some researchers indicated that help-seeking is one of the efficient ways of combating problems and it results in the reduction of psychological confusion and increase of learning strategies (e.g. Karabenick, Knapp, 1991). It is an effective way of managing learning when students have enough understanding or knowledge for dealing with an issue on themselves. This characteristic not only helps learners to cope with their learning needs immediately, but is an effective way to enhance and improve their performance.

Regarding the question posed in this study, the result showed that for the chosen vocabulary point, students who were taught under the word-map conditions generally outperformed those who had not been exposed to such instruction. There might be several reasons for the students' superior performance in the experimental group. One of the most important facets of this technique is that it promotes learners' vocabulary by providing them with plenty of opportunities to notice specific form in the written text. Other important aspect of this procedure is that there was a great interaction between the researchers and the learners. It could be regarded as a reciprocal technique in which the researchers mimed two strategies together, i.e., the word-map strategy and help-seeking strategy. When the learners were asked to read the text during post activities, their fluency and the number of the targeted words they learned were dramatically increased.

Generally speaking, according to the obtained results, the word-map strategy improved learners' repertoire. The researchers assume that this technique corresponds to all level of language proficiency and to nearly all languages: Arabic, Persian etc. The conclusion that may be made from the above statistics analysis is that the participants who were taught based on word-map technique generally tended to score higher in vocabulary test.

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