Vocabulary Teaching Strategies: How Do They Affect L2 Learners' Lexical Recall?

Mohammad Taghi Hassani [1], Abbas Zarei [2], Marzieh Sadeghpour [2]

[1] Imam Hossein University, Tehran & Takestan Branch, Islamic Azad University, Takestan, Iran; [2] Takestan Branch, Islamic Azad University, Takestan, Iran

Abstract

The present study set out to compare the effects of different vocabulary teaching strategies, teaching vocabularies through context, dictionary definition, and synonyms, on short-term and long-term retention of vocabulary items. 90 intermediate EFL learners were randomly divided into three groups of context, definition, and synonyms (thirty learners in each group). 30 vocabulary items were selected and taught to them in two sessions. Two delayed post-tests were administered to investigate the retention of vocabulary items, the first one after four weeks and the second after eight weeks of delay. The obtained scores were analyzed through one-way ANOVA. Results revealed that the context method produced superior results compared with the other two methods in both delayed post-tests. The findings of the study provide pedagogical implications for EFL teachers, learners, syllabus designers, material developers and language test makers. The findings of the study also provide helpful information about the most effective way of teaching vocabulary that leads to a more durable retention of L2 words.

Keywords: Implicit and explicit learning, Vocabulary retention, Long term, Synonym, Definition, Context

Introduction

Vocabulary is "a set of lexemes (the smallest unit in the meaning system of a language that can be distinguished from other similar units), including single words, compound words and idioms" (Richards & Schmidt, 2002, p. 580). Learning vocabulary is an important part of studying a second language. However, the best way to teach vocabulary is still unknown and most teachers and learners have often been undecided about the best way to choose. This uncertainty is strengthened by textbooks and syllabuses being inattentive in this regard (Meara, 1980; Schmitt, 2008).

Kafipour and Hamzah (2009) have ranked some vocabulary learning strategies based on their using frequency including using monolingual dictionary, guessing meaning from context, studying new words many times, connecting the word to its synonyms and antonyms, using new words in sentences, using English language media, taking note or highlighting, studying the sound of a word, making lists of new words, writing paragraphs using several new words, studying the word with classmates, asking classmates for the meaning, checking for L1 cognate, using physical action when learning a word, talking with native speakers, and asking the teacher to check definition.

Learning vocabulary may seem to be easy to some teachers, but it has always been a difficult task for learners. Learners use different ways such as using dictionaries, flash cards, synonyms and antonyms, to learn the words that they need to know. Despite these efforts they find learning vocabulary a hard job to manage (Nemati, 2009).

Vocabulary teaching is the process of selection and presentation of words (lexis) for learners. Meara (1980) considered vocabulary acquisition

Corresponding author: Marzieh Sadeghpour, Takestan Branch, Islamic Azad University, Takestan, Iran.
E-mail: marziehsadeghpour@gmail.com.

as a part of psychology of second language learning which had been neglected by researchers at the time. This was in part due to lack of theory and a principled system. When learners encounter a word, a lexical entry for that word must provide information of two different types: form and meaning. Lexical recognition is said to be "the point at which a one-to-one match is achieved between a word encountered in speech or writing and a word in the mind" (Field, 2004, p. 155).Retention of a word involves retrieval of a lexical entry from the lexicon, containing stored information about a word's form and its meaning (Field, 2004). "Lexical effect" factors have an effect on the ease of access for the retrieval of the lexicon. Among these factors reference can bemade to: frequency effect (frequent words are recognized more rapidly than infrequent ones) and degradation effect (words that are clearly presented are recognized more rapidly than those which are not)" (Field, 2004, p.153).

Hulstijn (1992) studied advantages and disadvantages of inferring method, comparing the retention of inferred and given word meaning in incidental learning and found that meaning explained by synonyms was less effective compared with meaning selected from several options of multiple choice, concise context, and no-cue control. Fraser (1992) studied the strategies used by learners to process unfamiliar L2 vocabulary. The results indicated the potential for vocabulary learning through reading and the fact that some lexical processing strategies lead to higher retention rates than others.

A number of studies have been carried out in order to investigate the related works done in the area of vocabulary instruction. Nation and Na (1985) studied the factors affecting guessing vocabulary in context. The results showed that words in the low density text (1 unknown word in 25) were easier to guess than words in the high density text (1 word in 10). Moreover, verbs were easier to guess than nouns, which were easier than adverbs and adjectives.

De Groot and Keijzer (2000) looked at foreign language vocabulary learning and forgetting in experienced FL learners, using a paired-associate training technique. They studied the roles of word concreteness, cognate status, and word frequency. The results showed cognates and concrete words were easier to learn and less susceptible to forgetting than non-cognates and abstract words, with word frequency hardly affecting the performance,

and receptive testing showing a better recall than productive testing.

In another study, Rodriguez and Sadoski (2000) studied the effects of rote, context, keyword, and context/keyword methods on retention of vocabulary in EFL classes. Results showed that context/keyword method produced superior recall to any of the other three methods after one week, suggesting a very promising educational value for this method. Jiang (2002) examined the proposition that L2 lexical forms are often mapped to the existing semantic content of their first language translations rather than to new semantic specifications of their own. The results showed that the nonnative speakers, but not the native speakers, provided higher rating scores on or responded faster to L2 word pairs sharing the same L1 translations than to L2 word pairs that do not.

Mondria (2003) studied the effects of inferring, verifying, and memorizing on the retention of L2 word meanings and found that regardless of whether their meaning was provided by, or inferred from, context, the meaning inferred method took longer. Webb (2007) investigated the effect of repetition on vocabulary knowledge on 1, 3, 7, and 10 times and found after ten repetitions in context, some learning could occur, but full knowledge of a word would require more than ten repetitions. Finally, Laufer and Girsai (2008) studied the effect of explicit contrastive analysis and translation activities on the incidental acquisition of single words and collocations. Three groups of meaning-focused instruction, non-contrastive form-focused instruction, and contrastive analysis and translation were compared. The results showed contrastive analysis and translation group significantly outperformed the other two groups on all the tests.

Along the same lines, the present study intends to investigate if there are any differences among the effects of teaching vocabulary through context, dictionary definition, and synonyms on the short-term retention of vocabulary items and if there are any differences among the effects of teaching vocabulary through context, dictionary definition, and synonyms on the long-term retention of vocabulary items.

Methodology

Participants
Ninety Iranian EFL students of intermediate level were chosen as the participants of this study.

They were studying English (New Interchange1) in Soomer Language Institute in Alvand city, Qazvin Province. They were divided into three groups of synonyms, definition, and context each with 30 students. They were all males, ranging in age from 16 to 18. All participants had participated in a placement test, and based on their scores to the test they were placed in a pre-intermediate class studying Interchange 1.

Materials

To conduct this study, the following materials were used:

a. Vocabulary items: Thirty vocabulary items were selected to be taught to the students. Students were studying the book New Interchange 1, so the vocabulary items were selected from the book New Interchange 2 so that the selected vocabulary would be a little higher than their proficiency level. As a result, they had a strong motivation to learn them.

b. Vocabulary handouts: Each group had their own handouts. For the synonym group, the synonyms were extracted from Dictionary of Synonyms and Antonyms (Manser, 1990). For definition group, Oxford Advanced Learner's Dictionary and Narcis electronic dictionary were used, and for the context group different sentences were selected from various sources like dictionaries, books, newspapers and so on. The selected vocabulary items were divided into two parts (of 15 words). Three handouts were constructed and given to students during the treatment sessions. The handouts contained the same vocabulary items for each group; however, they used different ways of teaching.

c. Delayed tests: In this study, two delayed posttests were administered to investigate the effect of teaching methods on retention of vocabulary items. Two tests of 15 multiple choice questions were constructed as delayed posttests of the study. The first one was administered after four weeks and the second one after eight weeks. The participants were not informed that they would be tested on the items because the study aimed to test their retention of vocabulary actualized in a subconscious and natural way.

Procedure

First of all, the students were randomly divided into three groups of synonyms, definition, and context ;each with 30 students. Then in these two sessions students learned thirty vocabulary items (15 items in each session). Each group had its own handouts. For the synonym group, synonyms were ex-

tracted from Dictionary of Synonyms and Antonyms (Manser, 1990), for definition group Oxford Advanced Learner's Dictionary was used, and for context group, different sentences were selected from various sources like dictionaries, books, and newspapers in which new vocabularies from learners' textbooks were used and the contexts were easy enough for learners to comprehend.

Vocabulary was taught to the three groups. Two meetings were held for teaching each group. In each session, 15 vocabulary items were taught to the students. The participants in the synonyms group were instructed to establish the form-meaning link and associate the given word with its synonym as the initial stage of word knowledge. In the definition group, the participants were informed that the provided meanings for words were taken from the dictionary. The words were presented and defined to the learners.

In the context group, students were provided with three sentences for each word as the context in which it occurs. The participants were asked to read the sentences and the teacher provided explanations on them so that the meaning of the intended word was clear for them. For all the participants, the handouts for teaching the target vocabulary were given each session. The vocabulary items were the same among the groups; however, their handouts contained the meanings according to their respective method of conveying meanings, but they were not informed about posttests.

To investigate the effect of the selected methods of conveying meaning on retention of the vocabulary items, the learners were given two delayed posttests. The first posttest was administered four weeks after teaching of items, and the second posttest four weeks after the first test. In each posttest, half of the items (fifteen items) were tested to prevent overlaps. Because repeating the same items in second test might help learners to be able to recall the meanings of the vocabulary items. At last, the results of the posttests were statistically analyzed to check the hypotheses of the study and give answers to the research questions.

Results

Investigation of the first research question

For the reliability of the findings, a delayed posttest was used. To test the first null hypothesis derived from the first research question which was concerned with whether there was a difference

among the effects of selected methods of conveying meaning on retention of vocabulary items, two delayed post-tests were administered with 4-weeks and 8-weeks delays.

Table 1 shows the descriptive information for the groups on the first delayed post- test scores which was administered with a 4-week delay. The context group outperformed the definition group and the synonyms group with a mean of 10.23 out of 15. The definition group also gained better results in comparison with the synonyms group with a mean of 8.63 out of 15. The synonyms group scored the lowest with a mean of 6.67 out of 15.

Table 1. Descriptive information for the groups on the first delayed post- test.

Groups	N	Mean	Std. Deviation
Synonyms	30	6.67	1.882
Definition	30	8.63	2.220

Table 2. Testing the differences among the groups on the delayed post-test 1.

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	191.489	2	95.744	22.697	.000
Within Groups	367.000	87	4.218		
Total	558.489	89			

As it can be seen in table 2, a one-way ANOVA was conducted to compare the effect of teaching vocabulary through context, dictionary definition, and synonyms on the short-term retention of vocabulary items. There was a significant effect of vocabulary teaching techniques on the short-term retention of vocabulary items [F (2.87) = 22.69, p<0.05]. Therefore the first null hypothesis of no significant differences among groups is rejected and the alternative hypothesis is supported. Because the mean differences in the delayed post-test 1 were significant, post hoc comparisons were made.

Table 3. Tukey HSD post hoc comparisons of results among the groups (delayed post-test 1).

(I) group	(J) group	Multiple Comparisons				
		Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Synonyms	Definitions	-1.967*	.530	.001	-3.23	-.70
	Context	-3.567*	.530	.000	-4.83	-2.30
Definitions	Synonyms	1.967*	.530	.001	.70	3.23
	Context	-1.600*	.530	.009	-2.86	-.34
Context	Synonyms	3.567*	.530	.000	2.30	4.83
	Definitions	1.600*	.530	.009	.34	2.86

*The mean difference is significant at the 0.05 level.

Post hoc comparisons using Tukey HSD test indicated that the mean scores of the context group (M= 10.23, SD = 2.04), the definition group (M=8.63, SD=2.22), and the synonym group (M=6.67, SD =1.88) were significantly different from each other. However, the performance of the context group was much better than the other group.

Investigation of the second research question

The second delayed posttest was administered eight weeks after instruction (four weeks after the first delayed posttest). Similar to the first delayed posttest, for each group the same vocabulary items were tested through a 15-item multiple choice test across the selected methods.

Table 4 shows the descriptive information for the groups on the second delayed post- test scores which was administered with an 8-week delay. The table shows that similar to the delayed post-test 1, the context group outperformed the definition group, and the synonyms group with a mean of 8.07 out of 15. The definition group also gained better results compared to the synonyms group with a mean of 6.47 out of 15. The latter group scored the lowest with a mean of 5.43 out of 15.

Table 4. Descriptive information for the groups on the second delayed post-test.

Groups	N	Mean	Std. Deviation
Synonyms	30	5.43	2.012
Definition	30	6.47	2.209
Context	30	8.07	1.837

Table 5 shows the mean differences among groups on delayed post-test 2 as computed by the one-way ANOVA.

As it can be seen, there was a significant effect of selected method on long-term retention of vocabulary items [$F_{(2.87)}=12.88$, $p<0.05$]. Since the mean differences in the delayed post-test were significant, post hoc comparisons were applied. Table 6 shows the Tukey post-hoc analysis.

Table 5. Testing the differences among the groups on the delayed post-test 2

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	105.622	2	52.811	12.881	.000
Within Groups	356.700	87	4.100		
Total	462.322	89			

Table 6. Tukey HSD post hoc comparisons of results among the groups (delayed post-test 2).

(I) group	(J) group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Synonyms	Definitions	-1.033	.523	.124	-2.28	.21
	Context	-2.633*	.523	.000	-3.88	-1.39
Definitions	Synonyms	1.033	.523	.124	-.21	2.28
	Context	-1.600*	.523	.008	-2.85	-.35
Context	Synonyms	2.633*	.523	.000	1.39	3.88
	Definitions	1.600*	.523	.008	.35	2.85

As the table shows, Post hoc comparisons using the Tukey HSD test indicated that the mean score for the context group (M=8.07, SD=1.83) was significantly different from the definition group (M=6.47, SD=2.20) and the synonym group (M=5.43, SD=2.01). However, the definition group (M=6.47, SD=2.20) did not significantly differ from the synonyms group (M=5.43, SD=2.01)

The context method compared to definition and synonyms produced a significant effect on delayed post-tests showing higher gains for this method and resulting in durable learning. The obtained results indicated the statistically significant effect of context method compared to dictionary definition and synonym methods. This can be interpreted as showing real and durable learning and suggesting a potential value for this method regarding the retention of vocabulary items.

Discussion

This study compared the effects of conveying meaning through synonyms, dictionary definitions, and context on short-term and long-term retention of English vocabulary items by male intermediate level Iranian EFL learners.

The first research question dealt with whether there was any statistically significant difference among the effects of teaching vocabulary through synonyms, dictionary definition, and context on short-term retention of vocabulary items. Based on the analyses presented in, the first null hypothesis was rejected. Therefore, the findings of the study showed that there was a statistically significant difference among the effects of synonyms, dictionary definition, and context on short-term retention of vocabulary items. The results showed that the context group outperformed the definition group, and the synonyms group. The definition group also gained better results compared to the synonyms group. The synonyms group obtained the lowest scores.

The obtained results suggest that the provided context had helped the learners to create a network of associations for the meanings. Learners connect words and phrases in a context to other words, phrases or images and create an image of the event or the state that has been mentioned in the context. This image helps learners' retention.

This study tested the vocabulary knowledge of the learners at recognition level, where learners were asked to choose the meaning on multiple-choice tests (rather than recall or produce the target words). When learners face a word, a lexical entry for that word must provide information of two different types: form and meaning. Lexical recognition is "the point at which a one-to-one match is achieved betweenwords encountered in speech or writing and words in the mind" (Field, 2004, p. 155). As Field (2004) argues "most current models assume that words are linked in a complex network which reflects semantic relationships such as partial synonymy, antonymy and hyponym. Lexical items are similarly associated by form. This has obvious benefits for understanding language" (p. 159). Elaboration assists the process of building a mental representation; "a non-verbal construct which forms a reader's/listener's understanding of a text and which is constantly updated as more information is processed in comprehension" (Field, 2004, p. 177) and it can help the learner and support recall of the information.

The point that the definition method gained a lower mean can be due to the length of definitions forcing a greater cognitive load on memory (without much of an association) and the lowest mean for synonym can be the effect of discreteness of the given word (in the form of rote rehearsal).

The first research question investigated the effects of different ways of teaching on short-term retention of vocabulary items and the results showed the effectiveness of instruction and the overall superiority of the context method over the other two methods.

The results of long-term delayed post-test indicated that the context group outperformed the definition group while the synonyms group with a mean of 8.07 out of 15 suggesting a very promising educational value for this method. The definition group also gained better results compared to the synonyms group with a mean of 6.47 out of 15. The synonym group scored the lowest with a mean of 5.43 out of 15.

Conclusions

The results of the present study indicated that teaching vocabulary through context is the most effective way in comparison with the other two ways (i.e. definition and synonym). Because the context around the word helps the learner to create an image of the event or the state that has been mentioned in the context which leads to a longer and more effective retention. The findings of this study also showed that the definition group had better results than the synonym group. The synonyms group had the lowest scores; it means memorizing lists of words cannot effectively help learners to keep the meaning of those words in their mind for a long time. On the whole, it can be concluded that the context group would continue to gain the highest results as a result of forming association with the mental network of knowledge.

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