A COMPARATIVE STUDY ON PASSIVE VOCABULARY GROWTH THROUGH ROTE LEARNING AND MULTIPLE EXPOSURES AMONG IRANIAN EFL LEARNERS

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ABSTRACT

Despite the historical prevalence of rote memorization as a way of vocabulary learning, it has been under severe critics in recent decades. However, some researchers found a positive attitude toward it among English learners as a foreign language (EFL). New trend of vocabulary learning strategies are focused on contextualization, one of which is multiple exposures technique. After all, this question remains as to whether EFL learners should dismiss rote learning thoroughly? This research aimed to have a comparison on the effectiveness of rote learning and multiple exposures in passive vocabulary growth i.e. retention of the first language (L1) equivalents of English words. Nineteen participants both male and female with associate degree in different disciplines who had a considerably low level of English language proficiency were selected and instructed a list of 26 single words, half of them with rote learning, and rest with multiple exposures. It was concluded that passive vocabulary growth (recalling the meaning of words in first language) is significantly higher for the list of words which was instructed through rote learning. Participants' low level of English proficiency and their cultural tendency may account for superiority of rote learning on multiple exposures in this specific condition. This implies that teachers and learners of EFL can take the advantage of rote learning when learners' English proficiency level is low and the purpose of vocabulary learning is merely word recognition and its translation in L1, as well as they should not be deluded by any imprecise claims about the significance of multiple exposures.

Keywords: Passive vocabulary, Retention, Exposure, Rote, Incidental learning.

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Contribution/ Originality

This study reveals that despite severe criticisms against traditional rote learning, it still have its own advantages in certain vocabulary learning situations compared with multiple exposures.
1. INTRODUCTION

1.1. Overview

The dynamic continuum of different vocabulary learning methods and strategies extends from traditional simple rote learning to what introduced by Nagy in 1985 as an incidental vocabulary acquisition. Rote is the process of learning something by repeating it until you remember it (Cowie 1989). In the case of vocabulary learning, there will be a list of new words and their L1 translation. As Gairns and Redman (1986) see it, rote learning is deeply rooted in the history in language learning. However, despite its historical predominance, rote learning has been under severe criticism since the emergence of cognitive psychology and the notion of context-based learning. In a recent study of Subas (2014), Turkish EFL students expressed that they do not believe in the use of memorization strategies. Similarly, Cheung (2000) criticized that rote learning-based system in Hong Kong’s education fails to produce creativity and problem-solving skill although it seems to get high recall ability in memorization. These are in consistence with the findings of Pincas (1996) that there is a negative attitude toward rote among many who are involved in EFL learning. However, does this mean that rote learning could be discarded thoroughly from vocabulary learning activities? Some researchers do not believe so, as Samian and Tavakoli (2012) for instance, found that Iranian EFL learners believe that rote learning strategies is preferable among all of memory strategies for vocabulary learning. Li (2005) found out that EFL students still hold a positive attitude toward Rote learning and still use in their language learning as an effective strategy. Also Shen (2003) put forward that the importance of memorization is not ignorable in vocabulary learning; words will have a little chance to be produced if they are not memorized effectively by the learner.

One possible reason for these contradictory views may refer to the fact that these studies have not distinguished passive vocabulary knowledge from active one. In fact, different researchers give different definitions of how to “know a word”. For instance, Kersten (2010) defined knowing a word as including knowing its form and meaning, while Nation (2001) believes word knowledge includes many components: the word’s pronunciation, spelling, morphology, syntax, meaning, as well as its use in terms of its functions, collocations and constraints.

After all, what should a learner conclude among all these contradictory remarks? A comparison between the effectiveness of rote learning and any of context-based techniques could answer this question. “Multiple exposures” technique, which is alternatively called “repeated exposure”, is an appropriate instance for this comparison, since while having the advantages of contextualization; it has the basic element of repetition in common with rote learning. Obviously without a considerable amount of exposure, it would not be possible to develop the different dimensions of vocabulary knowledge. Words are presented repeatedly within several contexts in multiple exposures technique.

The aim of this study is to have a comparison between the outcomes of rote learning and multiple exposures, in the case of learning vocabulary for the purpose of passive knowledge, i.e. Retention of their meaning in first language (L1). This will enable the teachers, learners and course designers to choose the most appropriate method between these two, for this specific situation.

1.2. Research Question

Do Rote learning results in higher passive vocabulary growth, compared with multiple exposures?

2. LITERATURE REVIEW

2.1. Framework of the Study

A dynamic continuum of different approaches in vocabulary learning extends from traditional simple rote learning to what introduced by Nagy in 1985 as incidental vocabulary acquisition. In order to have a better
understanding of vocabulary teaching methods one could look at the classification of Oxford and Crookall (1990) on common techniques which are presented in four categories:

“(1) de-contextualizing: word lists, flashcards, and dictionary use;
(2) Semi-contextualizing: word grouping, association, visual imagery, aural imaginary, keyword, physical response, physical sensation, and semantic mapping;
(3) Fully contextualizing: reading, listening, speaking, and writing;
(4) Adaptable: structured reviewing.

This research is focused on categories 1 and 3. “De-contextualization” is rooted in traditional grammar and translation method (GTM) as well as behavioristic psychology and structuralism linguistic approach, which appears in this study in the form of repetition of a word list i.e. rote learning. The notion of “fully contextualization” which implies meaningful learning, emerged from the more recent communicative approach, and multiple exposures technique is the representation of this approach in this study.

2.2. The Importance of Vocabulary Growth

Study of vocabulary as Candlin (1988) stated is at the heart of language. Researchers have perceived that many of learners’ difficulties, both in comprehension and production is due to their inadequate level of vocabulary knowledge, and even those of the higher levels of language competence and performance still require learning vocabulary (Laufer, 1986; Nation, 1990). Similarly, Knight (1994) as cited by Yoshi (2002) puts forward that learning words considered to be the most important aspect of second language acquisition. The findings of the researches are also implying the fact that “lexical competence is at the heart of communicative competence” (Meara, 1996).

However, as Zimmerman (1997) as cited by Browne (2003) announced “the teaching and learning of vocabulary has been undervalued in the field of second language acquisition (SLA) throughout its varying stages and up to the present day” (p. 5).

2.3. Rote learning for vocabulary growth

Let’s have a look on the definition of rote learning in different dictionaries: Rote is the process of learning something by repeating it until you remember it rather than by understanding the meaning of it Cowie (1989). To learn something by rote, or rote learning means learning something in order to be able to repeat it from memory rather than learning it in order to understand it Procter (1995).

As Gairns and Redman (1986) see it, rote learning is deeply rooted in the history in language learning: the repetition of target language items could be done either silently or aloud and may involve writing down the items several times. The target items are usually gathered in list form. In case of vocabulary learning, there will be a list of new words and their L1 translation. As Li (2005) puts forward, rote learning with its significant role in vocabulary learning strategies, is defined as repetition, memorization, and practicing. The elements of repetition and memory, remind us learning through habit formation in structuralism psychology. Based on this school of psychology, no mental processing is involved in learning. It is merely considered to be a simple and passive process of learning. Behkol (2010) is also indicated that traditional way of vocabulary learning is based on the definitional approach; and it is carried out by looking up in a dictionary or glossary or drill.

2.4. Criticism of Rote Learning for Vocabulary Growth

Despite its historical prevalence, rote learning has been under severe critics since the advent of cognitive psychology and communicative language learning, in which contextualization is highly credited. For instance, in a
recent study of Subas (2014) Turkish EFL students expressed that they do not believe in the use of memorization strategies. Similarly, Cheung (2000) criticized that rote learning based system in Hong Kong’s education fails to produce creativity and problem-solving skill although it seems to get high recall ability in memorization. The study of Pincas (1996) in the field of second language learning as well as classroom teaching methodology; as cited by Shen (2003) seems not to have a favorable attitude toward this technique.

The importance of memorization is however, not ignorable in vocabulary learning, as Shen (2003) believes, words will have a little chance to be produced if they are not memorized effectively by the learner.

2.5. Incidental Vocabulary Acquisition

As it was mentioned earlier, if one side of the vocabulary learning spectrum is rote learning, it’s another extreme might be what Nagy et al. (1985) introduced as incidental vocabulary acquisition. Incidental vocabulary acquisition is defined as the acquisition of vocabulary as a by-product of another activity (Hulstijn, 2001). During a task or an activity, the learners may gain some new words through their utilization or by looking them up in a dictionary. A part of these newly learnt vocabularies may be retained in long-term, even though there has not been any plan and deliberate attention for their learning. As far as the pedagogy is concerned, vocabulary learning is just put on the burden of incidental learning as a long tradition in the most of ESL classroom.

Despite its specific undeniable privileges, there are, however, some disadvantages for incidental vocabulary learning in comparison with more direct learning. Incidental vocabulary learning is not always effective or efficient (Hulstijn, 1992). In other words, even though the evidences have proved consistently that vocabulary is acquired incidentally while focusing on meaning, however, it also has been argued that reliance only on incidental learning may not be suffice, so it have to be proliferated by intentional learning, and in fact there should be a combination of both, as the most appropriate and most effective approach (Ponniah, 2011).

2.6. Extensive Reading

Based on Krashen (1989) input theory the most effective way to acquire new vocabulary is to expose the learners to a huge amount of “comprehensible input” through extensive reading. Nowadays, Thanks to the Krashen’s idea concerning the need for a huge amount of comprehensible input, as well as the advantages of extensive reading, it has become, one of the most predominant methods for enhancing vocabulary skills of the second language learners, since 1980.

However, this technique has its own opponent, as it is the case for the others. (Laufer (2001) as cited by Akbarian, 2010) believe that word acquisition from mere reading activities are not much significant. To get a better result, there should be some supplementary word-focused tasks with reading. Surprisingly, when reading is compared with a word-focused activity alone, it is the latter that turns out to be effective for second language vocabulary acquisition.

2.7. Multitude Exposure

The importance of repeated exposure become clear, when considering the fact that receptive and productive knowledge of a word involves attention to its forms, meanings, and uses in a range of contexts (Nation, 2001). Obviously without a considerable amount of exposure, it would not be possible to develop these different dimensions of vocabulary knowledge. Experimental research on implicit learning (Ellis, 1994) has concluded that repeated exposure to words’ formal features in input is crucial if words are to be internalized in learners’ lexicons. Moreover, in a study of incidental reading that compared frequency and contextual richness, Zahar et al. (2001) came to the conclusion that vocabulary acquisition is a function of frequency. Laufer (2001) and Hulstijn (2001) also put forward
the idea that frequency should be considered in parallel with depth of cognitive processing while investigating vocabulary enhancement.

Although Nagy et al. (1985) think that even in a single exposure to a word, a “substantial if partial” knowledge can be gained; other researchers put forward different views based on their findings. For instance, Elley (1989) research suggests that frequency of exposure is a vital factor for learning new words. It was found in his two researches that there is a significant correlation (.43 and .60) between the number of occurrences of a word and the gain score, leading him to write that:

Clearly, for new learning to occur the text must contain some vocabulary beyond the pupils' present understanding [...] and there should normally be more than one exposure to each word. (1989, p. 184).

However, despite these supportive results, some other studies raised doubts about the effectiveness of this technique. For instance, Hall (1992) observed that there is a considerably low correlation (.36) between number of exposures to the words and their retention. Zahar et al. (2001) as cited by Joe (2010) conducted an investigation in order to have a comparison between the quality (richness of context) and quantity of vocabulary encounters in input, which concluded that there is no such a reliable evidence showing that rich, directive contexts led to greater vocabulary enhancement.

3. METHOD

3.1. Design

This study is quasi-experimental in nature and the data were collected quantitatively.

3.2. Participants

The study was conducted among 19 Iranian associate graduates from a variety of disciplines, other than English language. Although they were from different parts of the country with a different personal and educational background, however, all were educated within the country with the same educational system. They mostly were men but about 6 were women, altogether with a medium age of 30. Based on an interview which was conducted before the beginning the course all appeared to be homogeneous with a low level of proficiency in English.

3.3. Instruments

A list of 26 words was used which were selected based on these criteria:

1- The words which were taken from brochures, news and website of different organizations, had to have a lexical inter-relation in a way that they could appear together in some brief cohesive texts.

2- The level of difficulty and the frequency of occurrence of words did not have a great difference.

3- In order to eliminate the effect of intervening factors related to the shape and length of the words, only single words and not phrasal vocabulary were chosen and diversification in length were also maintained; The word list were a combination of one syllabic words up to those with five syllables.

The chosen 26 words were divided equally in two: The words in the list of A1 were assigned to be taught by means of rote learning (simple repetition), and the words in the list of A2 which were assigned to be taut through multiple exposures. The Persian meanings of all assigned words in both groups were also determined to be used during the treatment.

In addition to the word lists of A1 and A2, some concise and intensive texts comprising the target words of A2 with a high frequency of occurrence were prepared, in order to conduct multiple exposures treatment.
3.4. Procedures

Before everything, the groups were interviewed to make sure that they all are in a same range of proficiency. Hopefully it was the case, and there were no need to exclude someone. Then they were taken a pretest, consisting of all vocabulary items of A1 and A2 word lists. They were required to give the L1 translation of each word. The number of participants with correct answer for each item was calculated.

Instead of dividing participants in two groups, it was the list of target words which were divided in two, as it was explained in instruments section. Then the treatments were done during 11 sessions of the two months and half period of the course, in which the Persian meaning of the terms were instructed. However, the two word lists were practiced differently; the word list of A1 practiced by repetition (rote learning), and the words in the list of A2 were exposed through reading the short passages, which were prepared in advance. The number of repetition interval for the items of A1 word list were kept equal to the frequency of occurrence of the A2 word list items, in the given texts. The number of exposures chance were fluctuating from 5 to 8 for each terms of A2 word list, with no less than 5 different sessions. Therefore the number of repetition for each items of A1 word list maintained as 7, similarly with no less than 5 sessions. After ending the planned sessions of treatment, a posttest was given exactly with the same items of the pretest in order to observe the effects of different treatments on those items. It was conducted with a delay of one week after the last session of treatment, in order to eliminate the effect of short term memory.

3.5. Data Collection and Analysis

Paired sample t-teas were conducted in order to compare the results of pretest and posttest for two different word lists.

4. RESULTS AND DISCUSSIONS

4.1. Results

In the first place, homogeneity of previous vocabulary knowledge of the participants for two different lists of words was checked, based on the pretest and a comparison between the related results of two different word lists.

Table 1. Paired Samples Statistics of pretest results

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A01</td>
<td>.307</td>
<td>13</td>
<td>.630</td>
<td>.174</td>
</tr>
<tr>
<td>A02</td>
<td>.230</td>
<td>13</td>
<td>.438</td>
<td>.121</td>
</tr>
</tbody>
</table>

Table 2. A comparison between the results of pretest for two different word lists

<table>
<thead>
<tr>
<th></th>
<th>Paired Differences</th>
<th>Std. Deviation</th>
<th>Std. Mean</th>
<th>Error 95% Confidence Interval</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1</td>
<td>A01 - A02</td>
<td>.0769</td>
<td>.7595</td>
<td>.2106</td>
<td>-.382</td>
<td>.535</td>
<td>.365</td>
</tr>
</tbody>
</table>

As it is seen in the Table 2, the P value is 0.721 which is higher than 0.05. This implies that there is no significant difference between the backgrounds knowledge of the two groups as far as the lists of word are concerned. So the selected words are appropriate for the purpose of this study. Besides, the mean difference of the two lists is 0.076 which indicates that vocabulary background knowledge of the group for two lists is almost the same.

Then the amount of progress in each of the two different word lists is compared. The P value in the Table 3 is 0.000 which means that there is a significant growth after treatment, as far as both lists of words are concerned.
Besides, and a high amount of mean difference between the results of pretest and posttest reveal that both methods of instruction were very significantly effective.

Table 3. Paired Samples Test for vocabulary growth of the participants in each word list

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 A1 - A01</td>
<td>9.384</td>
<td>2.59931</td>
<td>.721</td>
<td>7.813 - 10.955</td>
<td>13.018</td>
<td>12</td>
<td>.000</td>
</tr>
<tr>
<td>Pair 2 A2 - A02</td>
<td>7.153</td>
<td>2.967</td>
<td>.8231</td>
<td>5.360 - 8.947</td>
<td>8.691</td>
<td>12</td>
<td>.000</td>
</tr>
</tbody>
</table>

Now it is the time to have a comparison on the effect of two different methods of rote learning and multiple exposures. In order to do so, first we need to calculate two other latent variables of diffA1 and diffA2, in which diffA1 = A1 (results of posttest for word list of rote learning) - A01 (results of pretest for word list of rote learning) and diffA2 = A2 (results of posttest for word list of exposure) – A02 (results of pretest for word list of exposure).

Table 4. Paired Samples Test for comparing the effects of two techniques

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 diffA1 - diffA2</td>
<td>2.230</td>
<td>3.244</td>
<td>.899</td>
<td>.2702 - 4.191</td>
<td>2.479</td>
<td>12</td>
<td>.029</td>
</tr>
</tbody>
</table>

Table 5. Paired Samples Statistics for comparing the effects of two techniques

<table>
<thead>
<tr>
<th>Mean</th>
<th>N</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>diffA1</td>
<td>9.384</td>
<td>13</td>
<td>2.599</td>
</tr>
<tr>
<td>diffA2</td>
<td>7.153</td>
<td>13</td>
<td>2.967</td>
</tr>
</tbody>
</table>

The P value of 0.029 in the table 4, which is lower than 0.05, implies that there is a significant difference between the outcomes of two techniques. The means of the results given in table 5 identify the more effective one, which is rote learning with the mean of 9.384 and the mean difference of 2.230.

4.2. Discussions

4.2.1. Possible Causes of Superiority of Rote Learning

Rote learning proved to be more effective in growing passive vocabulary knowledge in comparison with multiple exposures technique. This in fact is somehow in contrary to the findings of many others researches. But what can account for this? Two explanations seems be relevant in this respect: the issues of the proficiency level of the learners and the cultural and educational background of the learners.

4.2.2. Proficiency Related Justification

The proficiency level of the learners in this specific case was low (based on the results of pretest, as well as their self-declarations in the interview). This implies that rote learning is more effective than multiple exposures for elementary level of learners. But why did multiple exposures technique appear to be less effective as an instruction
method for low level of learners? The answer lies in what Nagy et al. (1985) stated, that in order to take the advantages of incidental vocabulary learning (which is similar way as multiple exposure), one must be familiar with at least 95% of vocabulary of the text.

### 4.2.3. Cultural and Educational Background Justification

Second issue is concerned with the cultural and educational background of the learners. This study has done in Iran. In a recent survey which was conducted by Samian and Tavakoli (2012) it is revealed that the rote learning strategy is the first preference of Iranian EFL learners among all memory strategies for vocabulary learning. The researchers assume that this preference of rote learning is rooted in educational background and the habit of being reluctant to try out the best strategies. A similar critic was put forward in 2000 by Cheung about Hong Kong’s education system. He confirmed the high recall ability of memorization, though blamed its failure to produce creativity and problem-solving skill. All these remarks were in consistent with the findings of Politzer and McGroarty (1985) and O’Malley and Chamot (1990) who figured out that, students from Asian backgrounds prefer rote learning and language rules as opposed to more communicative strategies.

### 5. CONCLUSION

This study revealed that rote learning results in higher vocabulary growth in case of single word learning and for the purpose of passive vocabulary knowledge (retention of the meaning of the word in L1). This means that this traditional technique does not need to be discarded thoroughly despite critics, as it has its own capacities and privileges, given an appropriate situation. Cultural tendency and low level of language proficiency of learners may account for this significant superiority of rote on multiple exposures. On the other hands, multiple exposures technique proved to have a lesser effect in passive vocabulary growth in case of instructing low level of English learners. This may be due to the fact that low level learners cannot take the advantages of contextual clues which is the main privilege of multiple exposures.

This research imply for course designers, EFL teachers and learners, that despite critics, it is wise to maintain rote learning as a part of learning activities in the beginning steps of instructions for elementary level of English learners, as well as they should not be deluded by any exaggerated and imprecise claims about the significance of multiple exposures. Finally, it is worthy to mention that this research focused on learning for the purpose of only “passive” vocabulary knowledge, so the cases of learning for the purpose of active use of the vocabulary items might be different and it is

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