

The Effect of Durational Versus Interval Repetition on L2 Vocabulary Retention

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ABSTRACT

The purpose of the study was to investigate the effect of durational and interval repetition on vocabulary retention. In order to carry out the study and achieve this purpose, two homogeneous groups were selected according to their scores on CELT. The number of subjects in each group was 30. Subjects were forced to memorize 150 new words. It needs to be mentioned that Liethner box was the most Salient material which was used in this study design. The subjects were all high school graduate students (pre-university students) studying in Kanoon Farhang Amozesh (one of the local educational centers) and preparing for the university entrance examination. All of the subjects were female, and majority of them were between 17-20 years old. After gathering data and by comparing the means and standard deviations of the experimental and control groups subjects' scores on the CELT and post-test, it was revealed that repetition, particularly durational repetition, had significant effect on L2 vocabulary retention.

KEY WORDS: durational repetition, interval repetition, vocabulary retention, CELT

1. INTRODUCTION

1.1 Statement of the problem

Over the years of language teaching, what has always made itself felt more sharply is the fact that students in all levels of proficiency, literally, suffer from an impoverished stock of vocabulary. Given the common prevailing teaching techniques, the researchers postulated that most probably all these methods and techniques are either inappropriate to the situation and to the type of students or are faulty in practice as Krashen argues that many vocabulary teaching methods are at best boring, and at worst painful [12].

1-2. Historical trends in L2 vocabulary

The view that vocabulary is secondary in importance for successful language learning has now really changed. Although vocabulary teaching and learning were ignored to a great extent in some methods of teaching for some decades, there is now a widespread agreement upon the need for language learners to improve their knowledge of vocabulary [1, 6, 26]. After a period of relative neglect vis-à-vis other aspects of second language learning (phonology, grammar and discourse issues), the study of L2 vocabulary acquisition has gained momentum in the last fifteen years. Long and Richards noted that since the mid 1980s, there has been a growing body of empirically based studies of such issues on the nature of the bilingual lexicon, vocabulary acquisition, lexical storage, lexical retrieval, and the use of vocabulary by second language learners. Vocabulary acquisition is crucial to academic development. Not only do students need a rich body of work knowledge to succeed in basic skill areas, they also need a specialized vocabulary to learn content area material. The enduring effect of the vocabulary limitations of students with diverse needs is becoming increasingly apparent. Not surprisingly, vocabulary presents a serious linguistic obstacle to many non-native English students. They must learn thousands words that speakers and writers of English use [15]. In a study of L2 university students by Meara, lexical errors outnumbered grammatical errors by 4: 1 [16]. Similarly, a survey of L2 university students found that they identified vocabulary as a major factor that held them back in academic writing tasks [26]. Laufer, as cited by Zimmerman, [26] also argued that if fluency is understood as the ability to convey a message with ease and comprehensibility, then vocabulary adequacy and accuracy matter more than grammatical correctness [13]. Learners usually admit that they experience considerable difficulty with vocabulary and many of them identify the acquisition of vocabulary as their greatest course of problem .

According to Coady, in the last fifteen years or so, some language teaching scholars and instructors have published articles and books that advocate vocabulary instruction. The result is an extensive body of literature comprising a wide-ranging continuum of arguments, studies, and suggestion about the proper role of vocabulary instruction in language [6]. There are also a widely varying number of approaches, methods, and techniques dealing with vocabulary and/or acquisition. A rigorous scrutiny of miscellaneous approaches and techniques to L2 vocabulary acquisition delicately shows that these techniques and approaches concentrate on effective ways for acquiring new vocabulary and pay little attention to how to retain the acquired vocabulary victoriously.

Zimmerman and Widdowson claim that native speaker can better understand ungrammatical utterances with accurate vocabulary than those with accurate grammar and inaccurate vocabulary [26, 25].

Indeed, it has been suggested that a command of vocabulary is necessary if we want to communicate effectively and adequately through the language and communication stops when learners lack the necessary commands of the words. The significance of vocabulary is justified by the assertion of different scholars' ideas. Allen (1983, p.5) points out, "Communication breaks down when people do not use the right words [1]." Chastain (1988, p.372) believes, "Vocabulary plays great role in communication than the other components of language [5]." Celce-Murcia (1991, p. 243) mentions, "Vocabulary is considered a central element in language instruction for the beginning level [4]." Rivers (1981, p. 469) argues, "It would be impossible to learn a language without vocabulary [23]."

Levelt (cited in 8) further asserted that L2 lexicon is the driving force in sentence production since it mediates conceptualization and the encoding of grammar and phonology [14]. Gass and Selinker extend this idea to L2 contexts by stating, "in general, there is a good reason to believe that the lexicon is an important factor in accounting for the bulk of second language data in that the lexicon mediates language production." (p. 373) [8].

Vocabulary is central to language, as Zimmerman noted, and words are of critical importance to the typical language learner [26]. According to Krashen and Nation, one cannot learn a language without vocabulary [12, 19]. As Zimmerman stated, nevertheless, researchers and teachers in the field of language acquisition have typically undervalued the role of vocabulary, usually prioritizing syntax or phonology as central to linguistic theory and more critical to language pedagogy. [26]

One of the ideas that is currently gaining ground with regard to vocabulary acquisition in a foreign language is the view that inferring the meaning of a word from its context makes an important contribution to the retention of the word. Writers such as Schouten-Van Parreren, and Krashen have placed considerable emphasis on the value of reading and the importance of context in the learning of word meanings. [24, 12]

Carter, for example, detailed a five-step strategy that language learners might follow in deriving word meaning, noting, "the more advanced learners are, the more likely they are to benefit from learning words in context [3]. Prince mentions that students could have relied on context not just in order to guess the word's meaning, but also to provide the main network support for its learning from using the L2 network at their disposal in order to assimilate new word forms [22]. Likewise, according to Monsell, the value of context lies in its authenticity, the benefits of which is developing strategies such as anticipating and inferencing ideas [17]. Studies on vocabulary learning strategies, however, have been indicative of the popularity of dictionary strategies especially the use of bilingual dictionaries. Hayati et al. argues that a bilingual dictionary may be more likely to help lower proficiency learners in reading comprehension because their lack of vocabulary can be a significant factor in their inability to read [10]. The supposition is furthered somewhere else by Hayati et al in the process of second language vocabulary retention [11].

Cohen put considerable emphasis on learning words through association, and particularly mnemonic techniques because his research showed that learners do not use such aids systematically and therefore need instruction [7]. Schouten-van, in a study of Dutch students learning French, concluded that weak pupils should be assisted to "master relevant vocabulary learning and reading strategies" (p. 94). [24]

Oxford and Scarcella emphasized that, for most adult learners, direct vocabulary instruction is also beneficial and necessary. This is because students cannot usually acquire the mass vocabulary they need just by meaningful reading, speaking, listening and writing. For long-term retention and use of vocabulary, additional support is helpful [20]. Parry et al. carried out a longitudinal case study that demonstrates quite clearly how different cognitive strategies can have very dramatic impacts on the success or failure of particular students in their acquisition of the vocabulary [21]. Altman showed the importance of metacognitive awareness in the process of oral production of vocabulary.[2]

The purpose of the present study, therefore, is to investigate the effect of durational or interval repetition on vocabulary retention. It attempts to answer the following question: "Does durational or interval repetition have any significant effect on vocabulary retention?"

2. RESEARCH METHODOLOGY AND FRAMEWORK

2-1. Subjects

To investigate the effect of durational and interval repetition on vocabulary retention, ninety learners participated at the first stage. The subjects were high school graduate students (pre-university students) studying in Kanoon Farhang Amozesh, preparing for university entrance exam. All of them were female and majority of them were between 17-20 years old. To diminish the influence of proficiency of the subjects, a version of CELT was administered. The reason for reducing the number of subjects was twofold: First, after administering the CELT, to ensure the homogeneity of the subjects, a number of students were excluded from the study because they had either extremely low or high scores on the test (based on mean scores and standard deviation). Second, in order to have

equal number of students in both control and experimental groups, out of those participants, those students who had exactly the same scores (one below or above the mean scores) were selected. So there remained a class with a total of 30 students ‘control group’ and a class with a total of 30 students ‘experimental group’.

2-2. Data-gathering instruments

Three devices were utilized to collect appropriate data, including a CELT Test, a Teacher-made Test, and a Questionnaire.

2-3. Method and procedure

For the purpose of test validation, 60 students took part in a proficiency examination namely CELT test, out of whom 30 subjects were excluded from the study because they had either extremely low or high scores on the test. So by this way, we had a homogeneous group. Then a teacher-made test including 42 items was administered among the subjects for the purpose of validation. After scoring the test, item facility, item discrimination and choice distribution of the items were measured. By the analysis of the results, 22 items were deleted. For the purpose of validating the subject's proficiency level and separating a group of homogeneous subjects, a proficiency test namely CELT was given to a group of subjects. This test was given to 90 subjects out of whom 60 were chosen. These subjects were divided into two groups equally.

The subjects in the first group used Lietner box in order to memorize new vocabulary. The subjects in the second group, however, were assigned to memorize new vocabulary without the help of Lietner box. Needless to say, the number of the new vocabulary for the two groups was equal and it was around 150 words. Both groups were obliged to memorize the new words by their own special procedure. Furthermore, a questionnaire was provided by the researcher to be filled by the parents on their children's performance at home; how to memorize new words, the amount of time allocated to memorization and some other issues. At the end, the subjects in both groups were exposed to a teacher-made test which was composed of 20 test items and their scores were compared to investigate the effect of two different kinds of repetition on retention. In this study, there was no treatment and the EXPOST FACTO was employed to conduct the study. Based on Hatch and Farhady (1994), EXPOST FACTO design is often used when the researcher does not have any control over the selection and manipulation of independent variable.

3. RESULT AND DISCUSSION

In order to assess the results of the study effectively, a teacher-made test was administered to the subjects in both groups. A pilot test was also conducted to delete some items which were not acceptable according to item facility and item discrimination. To do so, at the first stage, a group of 60 subjects was selected to participate in the pilot study. In order to have a more homogeneous group, a 174-item CELT was administered to the group. The results were used to select those who were to be the final participants of the pilot study. The range of scores was determined based on the mean scores and standard deviation of all the scores on the test.

Table1. Mean, minimum, maximum, range, variance, Std, Error of Mean of the scores on the CELT

N	Mean	Minimum	Maximum	Range	Variance	Std Error of Mean
60	107.9667	69.00	155.00	86.00	430.406	2.67833

The statistical analysis conducted in the present study was determined based on the nature of the study, which was the comparison between vocabulary retention of the two groups of students. A t-test was used to examine the significance of the difference between the mean scores of the two groups of students, i.e., experimental and control groups. The 174-item CELT was administered as the first step of the study to determine the degree of homogeneity of the subjects. As mentioned earlier, 90 students took the test. The results were used to select those who were to be the final participants of the study. The range of the scores was determined based on the mean scores and the standard deviation of all the scores on the test.

Table 2. Mean, Minimum, Maximum, Range, Variance, Std. Error of Mean of the Scores on the CELT

N	Mean	Minimum	Maximum	Range	Variance	Std. Error of Mean
90	98.6889	23.00	166.00	143.00	2778.149	5.55593

On the post-test stage, after the administration of the homogeneity test, 60 subjects were selected based on their scores on CELT; they were divided into two groups equally, 30 subjects in each group. At the end, the post-test (teacher-made test) was administered to the two groups. The results are as follows:

Table 3. Mean, Std. Error of Mean, Variance, Range, Maximum of the scores on the post test for experimental group

N	Mean	Std. Error of Mean	Variance	Range	Minimum	Maximum
Valid 30	13.4000	.66194	13.14483	11.00	7.00	18.00

Table 4. Mean, Std. Error of Mean, Variance, Range, Maximum of the scores on the post test for control group

N	Mean	Std. Error of Mean,	Variance	Range	Minimum	Maximum
Valid 30	12.2000	.62404	11.68276	11.00	8.00	19.00

Table 5. Descriptive statistics of experimental and control subjects' mean scores on the post test

Group	N	Mean	Std. Deviation	Std. Error of Mean
Experimental	30	13.4000	3.62558	.66194
Control	30	12.2000	3.41801	.62404

The t-observed value of the comparison of experimental control subjects' mean scores on the post-test is 1.319, which at 58 degrees of freedom and 0.05 level of significance, is much lower than the critical value of t, i.e., 2. Therefore, it can be concluded that there is a statistically significant difference between the experimental and control subjects' mean scores. The mean scores of the experimental and control groups were 13.40 and 12.20, respectively. In other words, the experimental group outperformed the control group on the post-test. Then the null hypothesis was rejected, and it could be concluded that the repetition has had a significant impact on the vocabulary retention. According to Hatch and Farhady (1995), the statistical analysis of t-test could help the researcher be confident that the differences between the performances of the two groups were not due to chance or sampling error.

In order to check the validity coefficient of the teacher-made vocabulary test of post-test, the Pearson Correlation Coefficients was calculated between the scores of experimental and control subjects on the CELT, the criterion test, and the teacher-made vocabulary test of post-test.

Table 6. Statistics of experimental and control subjects' mean scores on the post test

T Observed	Degree of Freedom	T Critical
1.319	58	2
P >0.05		

By comparing the mean and standard deviation of the experimental and control subjects' scores on the CELT and the post-test, it was interpreted that repetition, especially durational repetition, had a significant effect on retention. In other words, this kind of repetition equipped students with a specific manner for retention of acquired vocabulary.

5. Conclusion

In this research, two ways of repetition have been compared. In the experimental class, durational repetition and in the control class, interval repetition was utilized. Hence, the purpose of this study was to investigate the effect of two kinds of repetition on vocabulary retention. To conduct the research, a set of teacher-made test was administered to two homogeneous groups. Before administering the test, a pilot test was carried out. The objective for carrying the pilot test was twofold: First, owing to the fact that English vocabulary test was used as the tool for measuring the vocabulary retention ability of the learners, it had to be verified in terms of reliability and validity. Second, it was necessary to calculate the number of subjects to be included in the sample population. After administering the post-test, collecting data and summarizing the results, the data analyzed by means of statistical procedures indicated the following information: There was a significant difference between the mean scores and the subjects in the control group and experimental group. The study was carried out to investigate the effect of durational versus interval repetition on L2 vocabulary retention. The findings of the study indicate that there is a relationship between durational repetition and L2 vocabulary retention. In other words, the findings show that durational repetition has significant effect on L2 vocabulary retention.

REFERENCES

1. Allen, V. F. 1983. Techniques in teaching vocabulary. England: Oxford University Press.
2. Altman, R. 1997. Oral reproduction of vocabulary: A case study. Cambridge: Cambridge University Press.
3. Carter, R. 1987. Vocabulary: Applied linguistics perspectives. London: Allen and Unwi, Ltd.

4. Celce-Murcia, M. 1991. *Teaching English as a second or foreign language*. Los Angeles: University of California.
5. Chastain, K. 1988. *Developing second-language skills: Theory and Practice* (3rd ed.). Orlando, Florida: Harcourt Brace Jovanovich, Inc.
6. Coady, J. 1997. *L2 vocabulary acquisition through extensive reading*. Cambridge: Cambridge University Press.
7. Cohen, A. D. 1990. *Language learning: insights for learners, teachers, and researchers*. New York: Newbury House Publishers, Inc.
8. Gass, S., and Selinker, L. 2001. *Second language acquisition: an introductory course*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associations.
9. Hatch, E., & Farhady, H. 1994. *Research design and statistics: for applied linguistics*. Tehran: Rahnama Publications.
10. Hayati, M. Fattahzade, A. 2006. The effect of monolingual and bilingual dictionaries on vocabulary recall and retention of EFL learners. *The reading matrix*, 6 (2), 125--134
11. Hayati, M. and Pourmohammadi, M. 2005. A comparative study of using monolingual and bilingual dictionaries in reading comprehension of intermediate EFL students. *The Reading Matrix*, 5 (2), 61--66.
12. Krashen, S. D. 1987. *Principles and practice in second language acquisition*. London: Prentice Hall International.
13. Laufer, B. 1998 . The development of passive and active vocabulary in second language: Same or Different? *Applied Linguistics*, 19(2), (pp.255-271).
14. Levelt, W. 1989. *Speaking. from intention to articulation*. Cambridge, MA: The MIT Press.
15. Long, M., and Richards, Jack C. 1997. Series editors' preface. In *second language vocabulary acquisition*, ed. James Coady and Thomas Huckinix-x. Cambridge: Cambridge University Press.
16. Meara, P. 1989. Vocabulary acquisition: A neglected aspect of language learning. *Language teaching and linguistics abstracts*, 13, (pp.221--246).
17. Monsell, S. 1985 . Repetition and lexicon. In A. W. Ellis (Ed.). *Progress in psychology of language*, 2, (pp. 147--195). London: Lawrence Erlbaum Associates.
18. Mousavi, A. 1999. *A dictionary of language testing*. Tehran: Rahnama Publications.
19. Nation, I. S. P. 1991. *New ways in teaching vocabulary*. Alexandria, VA: TESOL.
20. Oxford, R. L., and Scarcella, R. C. 1994. Second language vocabulary learning among adults: State of the art in vocabulary instruction. *System*, 22, (pp. 231--243).
21. Parry, T. and Stansfield, C. 1990. *Language aptitude reconsidered*. Englewood Cliffs, N.J.: Prentice Hall.
22. Prince, P. 1996. Second language vocabulary learning: The role of context versus translation as a function of proficiency. *The Modern Language Journal*, 80, (pp. 478--4930).
23. Rivers, W. M. 1981. *Teaching foreign language skills* (2nd ed.). Chicago: University of Chicago Press.
24. Schouten-Van Parreren, C. 1992. Individual differences in vocabulary acquisition: A qualitative experiment in the first phase of secondary education. In P. Arnaud and H. Bejoint (Eds.), *Vocabulary and Applied Linguistics* (pp. 94--101). Basingstoke: Macmillan.
25. Widdowson, H. G. 1990. *The aspects of language teaching*. Oxford: Oxford University Press.
26. Zimmerman, C. B. 1997b. Do reading and interactive vocabulary instruction make a difference? (an empirical study). *TESOL Quarterly*, 31 (1), (pp. 21--140).