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The Impact of Auditory Devices on the Retention of Lexis

Fahimeh Rafi, M.A.

English Language Department, Zanjan Branch, Islamic Azad University, Zanjan Iran

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ABSTRACT

This study aims to investigate the effect of auditory devices on the retention of lexis. In order to do this research, first two groups of students were chosen based on a pretest, and then twenty suitable stories were selected. At the beginning of every session in both classes, the students were to listen to the audio- taped story (passage), and then the teacher explained the new words while students were looking at the copies of the story. After this stage, each student in the control group had to read the story to herself for five minutes, but students in the experimental group had to listen to the audio taped story for five minutes; they were not allowed to look at the copies anymore. Three weeks later, there were two visual and aural tests based on the story. This procedure was used for all the stories. Finally, the required data was collected and compared. The data on all sections were analyzed by means of t-test. Then, the result of the analysis rejected the null hypothesis and revealed the positive influence of auditory devices on the retention of lexis.

Key words: Auditory devices, Lexis, Retention, Audio- taped story, Aural test.

1. Introduction

Learning a second language is a long and complex task. Your whole person is “affected as you struggle to reach beyond the confines of your first language and into a new language, a new culture, a new way of thinking, feeling and acting” (Brown, 2007, P.1).

There are many people around the world who wish to learn a second language, especially English language which is considered an international language. Language teachers also try to find the best and the shortest way to help the learners learn the new language. Larsen-Freeman and Anderson (2011) state that “As a teacher of language, you have thoughts about your subject matter—what language is, what culture is—and about your students—who they are as learners and how it is they learn. You also have thoughts about yourself as a teacher and what you can do to help your students to learn” (P.1).

In the past, a little attention was paid to teaching vocabulary. Vocabulary learning is a continuous task and it is a key component of language learning. The work of the scholars and practitioners shows that there has been a renewed interest in learning and teaching vocabulary (Maftoon, Hamidi & Sarem, 2012). In fact, it was believed that teaching lexis was very time-consuming (Allen, 1983). But nowadays, the importance of teaching lexis is quite clear. Different teachers use variety of techniques to teach lexis. But why is vocabulary necessary in language learning? Lonergan (1984) believes that the aim of most language learning is to acquire the ability to communicate with others in the target language. Language learners should know enough vocabulary in order to be able to receive or convey information.

Reading is one of the useful techniques which are regularly used for teaching vocabulary. Reading is a receptive language process. “It is a psycholinguistic process which starts with a linguistic surface representation encoded by a writer and ends with meaning which the reader constructs” (Goodman, Cited in Carrel, Divine, & Eskey, 1988, P. 12). Bowen, Madsen, and Hilferty (1985) believe “a learner is far from passive as he receives, analyses, and interprets the oral signals that come his way, recreating the message of the speaker” (P.73). In fact, reading is a complex skill which involves a series of lesser skills: “first, the recognition of the black marks; second, the correction of these with formal linguistic elements; and third, the further correlation of the result with meaning” (Brouthon, Brumfit, Flavell, Hill & Pincass, 1980, P. 90).

The second important technique which is worth mentioning here is listening. “The term listening is used in language teaching to refer to a complex process that allows us to understand spoken language.” (Rost, Cited in Carter & Nunan, 2001, P.7). Listening to the teacher’s speech has always been useful. What about recorded materials? Harmer (1998) believes that we must have students listen to spoken English in order to “hear different varieties and accents rather than just the voice of their teacher with its own idiosyncrasies” (P. 97). On the other hand, O’Malley and Chamot (1990), and Ur (1984) believe that listening materials are most effective if they are constructed around a task. That is, listening should be purposeful; students should listen to the recorded materials for a specific purpose. Broughton, et al. (1980) indicate that there can be two purposes for listening comprehension: “it can be primarily for language items as part of the language program, or it can be principally for general comprehension and understanding” (P.72). Moreover, Mosallanejad (1999) states that “listening comprehension lessons should have definite goals, demand active overt student participation, be

carefully planned and constructed, provide a communication urgency, develop concentration, stress conscious memory work, and teach not test. The exercises should not go beyond the students' level of proficiency, be of normal speed and intonation" (P. 122).

For comprehending listening material, familiarity with sounds and words are of crucial importance. Richards (1990) indicates that "effective instructional materials in language teaching based on sound learning principles are appropriate to the learners' need, provide examples of how language is used, and provide opportunities for communicative and authentic language use" (P.50). Vivian Cook (1991) mentions three elements for the comprehension of speech: 1) access to words. This factor is very important in understanding the speech or even a sentence. That is to say, without the knowledge of words, students cannot understand the meaning of what they read or listen to. 2) parsing. This is a process through which "words and phrases are used to construct meaningful mental representation of text" (O'mally & Chamot, 1990, P.34). 3) memory process and cognition. This may be called the most important element dealing with "the storing and processing of information by the mind" (P.59). Students usually learn vocabularies for receptive activities, while learning them for productive activities will need deeper understanding, and will improve the chance of future recall. Schmitt and Schmitt (1995) in an article about learning and memorizing vocabularies mention some useful factors, two of which are relevant to this research. First, "the deeper the mental processing used when learning a word, the more likely that a student will remember it" (P.135); second, "the act of recalling a word makes it more likely that a learner will be able to recall it again later" (P.135).

In short, learning vocabulary is one of the most crucial aspects of language learning. Moreover, listening comprehension is considered to be very important and useful in language learning, and is used by many language teachers all over the world. Therefore, in this research, we try to test the influence of listening comprehension, particularly, on the retention of lexis. Considering the objective of the study, the following question is proposed: Does the use of auditory devices have any influence on the retention of lexis? The null hypothesis is that the use of auditory devices has no influence on the retention of lexis.

2. Methodology

2.1 Subjects

Sixty-two first graders at an English language institute in Zanjan participated in this study. They were all Iranian and their native language was Persian. The students were between fourteen to eighteen years of age and they were selected based on a pretest. At the first stage, the pretest was administered to a large numbered parallel group. Their mean score was calculated then those scored higher than the mean were excluded, and at last sixty-two students were randomly selected and divided into two groups--namely, an experimental and a control group. Both classes met at a special time in the morning, and each session continued an hour and a half. Therefore, all factors of time of day, treatment length in time, and other factors were equated in order not to have any impact on the rate of progress or the result of the test.

2.2 Instrumentation and materials

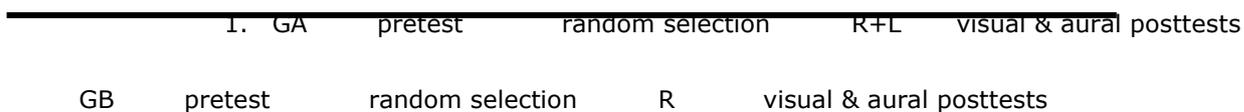
The following tests supplied the measurement of the study:

A. Pretests: at the first stage, the researcher calculated the average readability of the students' textbook based on the Fog's readability formula (Farhady, Jafarpoor, & Birjandi, 1994, P.282). After finding the range of readability, the researcher selected twenty stories (passages) –from different story books-- based on the same range. At the second stage, the researcher devised two parallel tests for each story; the items were designed based on the new vocabularies in the stories. Then, the newly developed tests had to be administered to a group of students with characteristics similar to those of the target group. Therefore, the researcher pretested the newly developed tests in order to examine item facility, item difficulty, and choice distribution. Moreover, the means and standard deviations for each of the two forms were computed to determine their equivalence. Then, the correlation between the two sets of scores was also computed. At the end, a representative sample test, consisting of fifty questions, were randomly selected from each story and conducted on a large number of students. The mean score was calculated and then those scores above the mean were excluded. Only sixty-two students were randomly selected who were divided into two equal groups.

B. Posttests: the two parallel test questions which had previously been designed for each passage were conducted after a three-week time interval--long enough to avoid the destructive learning effect. It is important to mention that the test choices were based on the translation of new lexis in multiple-choice form. These two posttests were administrated to compare the students' visual and aural ability in retaining the new lexis.

2.3 Design

This truly experimental research was designed as a pretest-posttest equivalent groups study. As it was stated before, two groups of students in an English language institute were randomly chosen and tested on the impact of auditory devices on the retention of lexis. The schematic representation of this research design was as follows:



GA = group A

GB = group B

R = reading

L = listening

2.4 Classroom procedure

To determine the possible consequence of the research process the following procedure was carried out:

1. Sixty-two students (first graders at an English language institute) were chosen based on the pretest vocabulary exam, which had been prepared by the researcher. Then, the students were divided into two groups. Twenty unseen stories had also been chosen based on the readability range of the students' textbook. Each group met three times a week in the morning. In each session, students were taught one new story, which included about ten new words. The researcher herself taught both classes.

2. Two different approaches were followed to cope with the two groups:

a. In the experimental (listening + reading) group at the beginning of each session, the researcher distributed copies of the passage among the students and then had them listen to the audio taped passage in order to expose them to the accurate pronunciation and orthographic form of the new lexis. After having the students listen to the story once, she explained the meaning of the new words and sentences to the students. Then, all of the copies of the stories were collected and students were not allowed to read the story on their own, instead, they were supposed to listen to the tape for five minutes. Moreover after each listening, students were allowed to ask any question about the story in their own language. They had also been told to attempt to memorize the new lexis while listening was conducted.

b. In the control (reading) group, at the beginning of each session the researcher gave each student a copy of a story and then had them listen to the audio taped story. After listening to the story, she explained the meaning of the new words and sentences to the students. Then, the students were asked to read the story on their own and try to memorize the new lexis in five minutes. They were also allowed to ask any questions related to the story, after each reading. When the allocated time was up, the teacher collected the papers.

3. Three weeks after teaching each story, two posttests were administered to both classes: aural and visual. In the aural test, the students were to listen to the audio taped questions and four choices, and then they were to mark the answers on the answer sheet. But in the visual test, they had the questions before them, so they could see the words and sentences. The same procedure was followed for all of the twenty stories. Three more points related to the tests worth mentioning here: first, aural and visual tests were parallel with one another; second, the tests were in multiple choice forms; third the choices offered were the translated counterparts of the English lexis.

4. After gathering the data required, in order to analyze the results and see the effect of the treatment, the following statistical techniques were applied:

a. The correlation coefficient between the results of the two teacher made vocabulary tests was computed to determine their equivalence.

b. The reliability of the teacher made vocabulary tests was calculated by using kR-21 formula.

- c. The mean, standard deviation, and variance for all the tests in both groups were calculated.
- d. The collected data was plugged into the t-test formula to find whether or not the calculated 't' was significant at the 0.05 levels. Of course, the t-test formula had to be used twice in order to:
 - compare the means of the visual tests in both groups.
 - compare the means of the aural tests in both groups.

3. Discussion of the results

Research question: Does the use of auditory devices have any influence on the retention of lexis?

Null hypothesis: The use of auditory devices has no influence on the retention of lexis.

In order to determine whether or not the two teacher made vocabulary tests were parallel, both tests were administrated to a sample group and then the correlation between two sets of scores was computed by Pearson's formula (Farhady, et al., 1994, p.70). The computed correlation coefficient was 0.87. This value demonstrated the strength of the relationship between the two tests. Then, in order to estimate the reliability of test scores, KR-21 formula was used. When the required data was plugged into the formula, the computed reliabilities were 0.96 and 0.91 respectively.

After obtaining the scores, means and standard deviations of all tests in both groups were computed. The data is shown in the following table (Table 1):

Table 1: Means and standard deviation of groups A & B

Groups	Tests	X	SD
(Experimental group)	Aural	15.06	2.31
	Visual	12.41	2.21
(Control group)	Aural	7.29	2.06
	Visual	9.48	2.53

As table 1 shows, the mean scores in group A, for both visual and aural tests, are higher than the mean scores in group B. But standard deviations in both groups are more or less close to each other.

In order to compare the means of the visual tests in both groups, the obtained means and standard deviations were plugged into t-test formula to calculate the value of 't'. The same procedure was also used for the data on aural tests in order to see if there were any significant differences between the means of the aural tests in both

groups. It should also be mentioned that the level of significant chosen for our two-tailed tests was 0.05. Finally, the following results were obtained:

Table 2: Critical and observed values of 't' at 0.05 level of significance

Tests	Df	Critical value	Observed value
Aural	60	2.000	14.38
Visual	60	2.000	4.96

As it is clear in table 2, the observed values in both tests are higher than the critical values. Therefore, the results of the analysis reject the null hypothesis and reveal the positive influence of auditory devices on the retention of lexis.

4. Conclusions

In this research, the researcher was going to determine the impact of auditory devices on the retention of lexis. Therefore, at the first stage, twenty short passages were selected and then two parallel tests were devised base on the stories' new lexis. Sixty-two first graders in an English language institute were also chosen based on a pretest. Then, the subjects were divided into two groups. At the beginning of each session in both classes, the researcher had the students listen to a story once, and then she explained the new words while the students were looking at the copies of the story. After this stage, the students in the experimental groups listened to the audio taped story for five minutes (they were not looking at the copies). But in the control group, each student had to read the story to herself for five minutes. After three weeks, two aural and visual tests were administrated. This procedure was used for all the stories. Then, the required data was collected and compared.

The data on all tests were analyzed by means of t-test. The results of the analysis have indicated quite clearly that the experimental group had higher rate of progress in learning new lexis than the control group. Therefore, the analysis rejects the null hypothesis and reveals that the use of auditory devices can have great influence on the retention of lexis.

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