

Teaching Vocabulary through Word Formation Strategies among Iranian Intermediate EFL Students

Mohammad Sadeghi¹, Mohammad Ali Nasrollahi, Omid Mazandarani, Mitra Mesgar

^{1,2,4} Islamic Azad University Sari Branch, ³ Islamic Azad University Aliabad Katoul Branch

Abstract. The aim of this study was to determine whether word formation strategy improves vocabulary learning of Iranian intermediate EFL students, or not. The research design is *True experimental, pretest post test control group design*. Hence, a group of seventy homogeneous students were selected. They were randomly assigned to control and experimental groups. Then, both groups enjoyed a series of similar instructions except that the students in experimental group were required to divide the words they are faced with to their meaningful and functional constituents. In order to make students learn vocabularies through analyzing them to their functional and grammatical affixes, they are led to relate the faced words to their relative groups and compare and contrast the similarities and differences between them. In this study the students used the books, which they studied in their institute. Finally, in order to capture the probable significant effect of learning vocabulary through word formation strategy on vocabulary learning of Iranian intermediate EFL students, a t-test was used. The results rejected the null hypothesis, and indicated that learning vocabulary through word formation strategy positively affected Iranian intermediate EFL students' vocabulary learning.

Keywords: Intermediate EFL Students, Vocabulary Learning, Word Formation strategy

1. Introduction

In order for Iranian EFL Intermediate students to communicate in English language, vocabulary learning has a highly paramount role. One of the essential strategies for learning vocabularies is Word Building Strategy or so called Word Formation Strategy.

Armbruster et al. 2001 defined word formation strategy as "teaching students to use word parts to figure out the meanings of words in text." This strategy can be beneficial to the students' vocabulary development. "Knowing some common prefixes and suffixes (affixes), base words, and root words can help students learn the meanings of many new words." [2]. The sense of curiosity of students toward the words parts and segments is very important. However, how to activate this sense of curiosity is more challenging. The study investigated whether the learning vocabulary through word formation strategy could affect on vocabulary learning of Iranian intermediate EFL students or not.

2. Materials & Methods

The researcher selected 120 students of intermediate level of Ghaemshahr Oxford English Institute. All of them were females and their ages were between 15 and 18. The researcher arranged the time with the principal of the institute. Then, he gave a standard test with established validity and reliability (A teacher-made test that had been standardized before by giving a test to a group of students and doing item analysis) and administered it at the arranged time. The researcher corrected the paper and after scoring he got the raw scores. Then he homogenized the subjects by selecting 68% of 120 subjects (70 subjects) in this way that the

¹ + Corresponding author. Tel: 00992-934810139
E-mail address: md_sadeqi@yahoo.com

researcher divided the subjects into two groups: "A control group" (which did not receive the special treatment) and "an experimental group" (which received the special treatment).

The test that the researcher intended to administer consisted of 30 multiple-choice vocabulary items of Nelson Intermediate Vocabulary Test (recognition items) and 30 completion items from the Intermediate vocabulary books (productive items) whose reliability and validity was established through standardizing the test by item analysis after giving the test to a group of students. The researcher decided to pilot the students who took the test. This test was assumed as pre-test. After 10 sessions training, the researcher administered a teacher-made test that had been standardized through administering a test to a group of students and doing item analysis (posttest). This valid and reliable test was based on the material covered during the 10 sessions of training to the both experimental and control group. This test contained 60 items including 30 multiple-choice items (recognition items) and 30 completion items (production items).

Out of 120 subjects taking the standard test, the researcher wanted to select homogeneous subjects. After scoring the tests and getting raw scores the researcher calculated the mode, median, the mean and the standard deviation of the scores. Those subjects who scored one standard deviation above and below the mean were selected. 68% of 120 subjects (70 subjects) were selected. The researcher divided the subjects into two groups: "A control group" and "an experimental group". He taught these two groups for 10 two hour sessions three times a week at 6:00 P.M. until 8:00 P.M. Even days were designed for experimental group and odd days for control group. The experimental group was instructed with word formation strategy that is, teaching vocabulary by explaining the meanings of prefixes, suffixes, stems and root words, and also the function of suffixes. Simultaneously the control group was instructed through conventional strategies of "definition of words", "examples", "synonyms", "antonyms" and "contextualization". After 10 sessions, the researcher administered a standardized post-test and calculated the scores of two different groups. He got the raw scores of the control group and the experimental group. He calculated the mean of scores of both groups and then put the raw scores in t-test (case II studies) formula. Then T-observed was gained and after that the researcher compared the T- observed with the T critical.

$$t_{obs} = \frac{X_e - X_c}{s(X_e - X_c)} \leftarrow \text{standard error of differences between means}$$

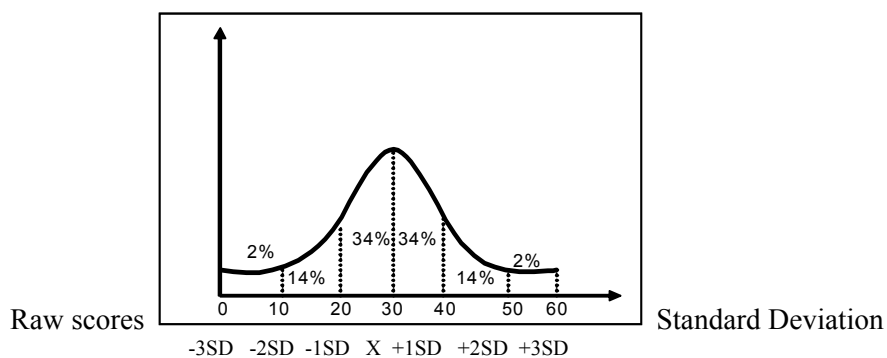


Figure (1)

The researcher selected ten units of New Interchange3 student's book (Jack C. Richards with Jonathan Hull and Susan Proctor) published by Cambridge University press for both control group and experimental group. All of 10 selected units of this book are communicative and include all four skills and sections containing snapshot, word power, grammar focus, and pronunciation. The researcher covered one unit in each session. All new vocabularies in different sections of each unit were segregated by the researcher in the experimental group. The researcher made an attempt to analyze each new word existing in the conversations, word power, grammar focus, snapshot, listening, speaking, reading, and writing skills sections. Each vocabulary was divided into its constituents called affixes. Then, the meaning of each of these affixes (including prefixes, suffixes, and roots) and their functions were explained to the students. After analyzing the vocabulary and clarifying the meanings of its affixes the researcher tried to write some more examples made by existing affixes in the specified vocabulary in order to boost the vocabulary knowledge of the students. Ten above mentioned units were exactly covered for the control group; however vocabularies were

explained through conventional strategies such as, dictionary definition, synonyms, antonyms, contextualization, exemplification, translation or using cognates.

The research design is True experimental, Pretest post test control group design.

G1 (random) T1xT2

G2 (random) T1 T2

In this design, there were two groups- an experimental group which received the special treatment and a control group which did not. The students were randomly assigned to one or another group, subsequent to administering a pretest before the treatment.

3. Results

In order to select homogeneous subjects the researcher chose a population of 120 Intermediate students of Oxford Institute of Ghaemshahr. The researcher made effort to control the variables of nationality, level of study, sex, age, etc. A teacher-made test consisting of 30 recognition items and 30 completion items that was previously standardized through administering it to a group of students and then performing item analysis was administered to the population and the following results were observed:

Raw scores	Simple Frequency	Z. Scores	T. Scores
56	3	4.3	93
53	3	3.6	86
51	4	3.13	81
49	5	2.67	77
48	4	2.44	74
47	5	2.2	72
46	4	1.97	70
43	7	1.27	63
42	5	1.04	60
40	6	0.58	56
39	4	0.34	53
38	7	0.11	51
37	10	-0.11	49
34	6	-0.81	42
33	4	-1.04	40
31	7	-1.51	35
30	6	-1.74	33
29	4	-1.97	31
26	5	-2.67	23
25	3	-2.9	21
24	7	-3.13	19
23	2	-3.37	17
21	3	-3.83	12
20	3	-4.06	10
19	2	-4.3	7
17	1	-4.76	2
Mean: 37.5 Mode:37 Median: 37 Range:39 SD: 4.30 VAR: 18.49			

(Table 1)

One standard deviation above the mean and one standard deviation below the mean were selected, that is 68% of the population was selected. 70 homogeneous subjects were ready to be placed in the experimental group and control group. The researcher divided them in two 35 groups haphazardly by the flip of the coin.

Experimental Group				Control Group			
Raw Score	Simple Frequency	Cumulative Frequency	Percentile Rank	Raw Score	Simple Frequency	Cumulative Frequency	Percentile Rank
46	2	35	100	46	2	35	100
43	5	33	94	43	2	33	94
42	2	28	80	42	3	31	88
40	3	26	74	40	3	28	80
39	2	23	65	39	2	25	71
38	3	21	60	38	4	23	65
37	5	18	51	37	5	19	54
34	3	13	37	34	3	14	40
33	2	10	28	33	2	11	31
31	3	8	22	31	4	9	25
30	4	5	14	30	2	5	14
29	1	1	3	29	3	3	8
N=35				N=35			
Mean :36.51 Median:37 Mode :37,43 Range:17 SD:8.27 VAR:68.5				Mean: 36.51 Median:37 Mode :37 Range:17 SD:4.9 VAR:24.5			

(Table 2)

The researcher calculated the mean, mode and the median of two the groups of students and then Standard deviations of each group raw scores were calculated (see Table 4.2). The means of both groups were the same (both 36.51), however the standard deviation and the variance of the experimental group were larger than the ones in control group in the pre-test. Ten sessions training were going to be carried out for each group. The researcher calculated the mean, mode and the median of two the groups of students and then Standard deviations of each group raw scores were calculated (see Tables3& 4.). The means of both groups were the same (both 36.51), however the standard deviation and the variance of the experimental group were larger than the ones in control group in the pre-test. Ten sessions training were going to be carried out for each group.

Experimental Group				
Raw scores	Simple Frequency	Relative Frequency	Cumulative Frequency	Percentile Rank
56	1	0.028	35	100
54	2	0.057	34	97
53	1	0.028	32	91
52	1	0.028	31	88
51	1	0.028	30	85
50	1	0.028	29	82
49	2	0.057	28	80
48	2	0.057	26	74
47	3	0.08	24	68
46	1	0.028	20	57
45	5	0.14	19	54
43	2	0.057	14	40
42	2	0.057	12	34
41	1	0.028	10	28
40	3	0.08	9	25
39	3	0.08	6	17
38	3	0.08	3	0.08
37	1	0.028	2	0.05
Mean:45	Mode 45	Median: 45	Range:19	SD:5.30
VAR: 28.11				

(Table 3)

Control Group				
Raw Scores	Simple Frequency	Relative Frequency	Cumulative Frequency	Percentile Rank
51	1	0.028	35	100
49	1	0.028	34	97
47	2	0.057	33	94
46	1	0.028	31	88
45	2	0.057	30	85
44	2	0.057	28	80
43	1	0.028	26	74
42	2	0.057	25	71
40	2	0.057	23	65
39	1	0.028	21	60
38	5	0.14	20	57
37	2	0.057	15	42
36	1	0.028	13	37
35	3	0.085	12	34
34	2	0.057	9	25
33	1	0.028	7	20
31	2	0.057	6	17
29	2	0.057	4	11
28	1	0.028	2	5
25	1	0.028	1	3
Mean:38.37	Mode:38	Median:38	Range:26	SD:6.33
VAR:40.18				

(Table 4)

4. Findings & Discussion

As it was mentioned earlier in the study, a research question under the title of "the effect of teaching vocabulary through word formation strategy on vocabulary learning of Iranian Intermediate EFL students" as proposed and along with the above research question a null hypothesis was brought about. The researcher believed that special instruction did result in higher scores for the experimental group and he wished he

could have made an alternative hypothesis that would have been one-tailed and directional. However he wanted to be extra hard on his predictions, so he decided to make no prediction as to the direction of the difference. The researcher null hypothesis was:

H_0 =the two samples are from the same population; the difference between the two sample means which represent population means is zero ($\mu_1 - \mu_2 = 0$)

This prediction said the researcher expected that any difference between his two groups fell well within the normal differences found for any two means in the population. If he could reject this hypothesis, he had to have a high enough t value to be sure that such a large difference was not due to chance.

The researcher had the null hypothesis and he could set his acceptance level at .05, and tried to reject the hypothesis. The researcher put the scores in T test Case II Studies Formula as follows:

$$T_{obs} = \frac{X_e - X_c}{S(X_e - X_c)}$$

← standard error of difference between means

The subscripts e and c refer, again, to experimental and control. The top part of the formula was the easy part. The difference between the two groups mean was as follows:

$$\begin{array}{lcl} X_e = 40.02 & S_e = 6.66 & X_e - X_c = 40.02 - 38.37 = 1.65 \\ X_c = 38.37 & S_c = 6.33 & \end{array}$$

Then the researcher needed to work out the standard error of differences between the means.

The formula for the standard error of differences between the means gave the researcher a ruler for the difference in means if he repeated this experiment over and over with different 35-member classes. That ruler was corrected for the size of the researcher classes to estimate the difference for the population:

$$S(X_e - X_c) = 1.39$$

Then the researcher had the standard error of differences between the means, he could find the T value:

$$T_{obs} = \frac{45 - 38.37}{1.39} = 4.7$$

At this point all the researcher needed was the critical value for t when the sample size was 35 and he had two groups. Each group had 35 students; one of the scores was predictable given the other 34. So each group had 34 d.f. Since there were two groups, the total d.f. ($n_1 - 1 + n_2 - 1$) was 68. The researcher turned to the t-distribution table of "the book *Research Design and Statistics for Applied Linguistics*, by Hatch & Farhady; Page 272" to find out whether he was justified in rejecting the null hypothesis. He found that his number of d.f., 68, was not listed but fell between 60 and 120. He chose 60 as being the more conservative estimate, and checked across to the .05 column. The t value needed for his selected significance level of .05 was 2.000. Fortunately, his t value was enough above t critical that he was quite safe in rejecting the null hypothesis. His two groups scored differently on the standardized validated posttest. The difference was statistically significant. This is support for the researcher's claim that his strategy of word formation promotes vocabulary learning of Iranian Intermediate EFL Students.

5. Conclusion

This study explored the positive effect of teaching vocabulary through word formation strategy on vocabulary learning of Iranian Intermediate EFL students. This study revealed some interesting facts. In brief this research showed that the students who received the special treatment with word formation strategy performed much better than the students who were instructed with conventional strategies in the posttest.

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