The Effect of Etymology Instruction on Vocabulary Learning of Upper-Intermediate EFL Iranian Learners

L'EFFET DE I'INSTRUCTION SUR LES ETYMOLOGIE APPRENTISSAGE DU VOCABULAIRE DE LA HAUTE-INTERMEDIAIRE APPRENANTS IRANIENS EFL

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Abstract

The present study mainly focused on the impact of etymology instruction on vocabulary learning of Iranian EFL upper-intermediate learners; secondly, it aimed to find out whether there is any significant difference between the performance of male and female learners in learning vocabulary through etymology strategy or not. To accomplish the study, 60 EFL learners studying English as their major within the age range of 20 to 28 of both males and females at Sabzevar Tarbiat Moallem University and Sabzevar Payam-e-Noor University, Iran, participated in this experiment. Their language proficiency was determined by the TOEFL test. In order to determine their homogeneity in vocabulary knowledge, a vocabulary test was given to them. Then they were randomly assigned to one control group and one experimental group, each including thirty students. Only the experimental group received the treatment. The control group followed its normal educational program. After completing the treatment sessions a posttest was administered to determine the effect of etymology instruction. To determine the statistical significance of the difference between the means of the two sets of scores, t-test was employed. The results of the study revealed that the students receiving treatment in the experimental group outperformed those in the control group. To test the second hypothesis another t- test was used to analyze the data, the results of which indicated that male and female EFL learners in experimental groupdiffered in their performance.

Key words: Etymology strategy; Affix; Vocabulary learning; Vocabulary learning strategy

Résumé

La présente étude a essentiellement porté sur l'impact de l'enseignement sur l'apprentissage du vocabulaire étymologique du iranienne EFL intermédiaire supérieur aux apprenants, d'autre part, elle visait à savoir s'il existe une différence significative entre les performances des apprenants masculins et féminins dans l'apprentissage du vocabulaire par l'étymologie stratégie ou non. Pour accomplir l'étude, 60 apprenants EFL étudier l'anglais comme majeur dans la tranche d'âge de 20 à 28 des mâles et des femelles à l'Université et SabzevarTarbiatMoallem SabzevarPayam-e-Noor Université, l'Iran a participé à cette maîtrise de la langue experiment.Their a été déterminé par le test TOEFL. Afin de déterminer leur homogénéité dans la connaissance du vocabulaire, un test de vocabulaire a été donné à eux. Puis ils ont été assignés au hasard à un groupe témoin et un groupe expérimental, comprenant chacun une trentaine d'étudiants. Seul le groupe expérimental ont reçu le traitement. Le groupe témoin a suivi son programme d'enseignement normal. Après avoir terminé les séances de traitement post-test a été administré une pour déterminer l'effet de l'instruction étymologie. Pour déterminer la signification statistique de la différence entre les moyennes des deux séries de valeurs, t-test a été employé. Les résultats de l'étude a révélé que les étudiants reçoivent un traitement dans le groupe expérimental ont surpassé ceux du groupe contrôle. Pour tester la seconde hypothèse une autre t-test a été utilisé pour analyser les données, dont les résultats ont indiqué que les apprenants masculins et féminins dans les EFL expérimentale groupdiffered dans leurs performances.

Mots clés: Stratégie Etymologie; Apposez;

L'Apprentissage du vocabulaire; Stratégie d'Apprentissage de vocabulaire

INTRODUCTION

There is no doubt that vocabulary is a crucial component of language proficiency. It provides a base for how well learners speak, listen, read, and write. Without an extensive vocabulary and strategies for acquiring new words, learners often achieve less than their potential and may be discouraged from making use of learning opportunities around them such as listening to the radio, listening to native speakers, reading, or watching television (Richards & Renandya, 2002, p.256). Accurate and adequate vocabulary influences language comprehension more than grammatical correctness in effective communication. For example, Wilkins (1972) makes an assertion that "without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (p.111), which clearly places vocabulary above grammar and highly values vocabulary learning and teaching.According to Nation (1993, as cited in Al-Farsi, 2008), knowledge of around 3,000 word families is the threshold needed for tapping other language skills. Without this threshold, learners encounter problems understanding the language they are exposed to. Vocabulary can play an important part in the development of the four skills: speaking, listening, reading, and writing. According to Robinett (1978, as cited in Iheanacho, 1997), two important components commonly shared by speaking, listening, reading, writing are vocabulary and grammatical structure. The third component is phonology (sound system). Vocabulary has a unique quality that other components (grammatical structure and phonology) do not have. Whereas grammatical structure and phonology are understood early in the long learning experience, speakers continually add to their vocabulary store. Students point to lack of vocabulary as their primary problem in second language learning (Celce-Murcia &Rosensweig, 1979, as cited in Anbarestani, 2010). They feel concerned about the burden of vocabulary learning and worry about how to tackle the difficult task of learning thousands of words.

As such, the development of adequate vocabulary size is vitally important in the L2 classroom. Researchers (e.g., Schmitt, 2000; Nation, 2001) have examined the use of learning strategies as onemeans to facilitate the development of L2 vocabulary knowledge. These strategies are consciously or unconsciously learned techniques for processing information in order to enhance learning, comprehension, and retention (O'Malley &Chamot, 1990). Strategies are especially important for language learning because they are the tools for active, self-directed involvement, which is essential for developing communicative competence (Oxford, 1990, p.1). Learner's autonomy can be enhanced by introducing learner to different vocabulary learning strategies which can be used in developing the learning process. Equipped with a range of different vocabulary strategies, students can decide upon how exactly they would like to deal with unknown words. A good knowledge of the strategies and ability to apply them in suitable situation might simplify the learning process of new vocabulary for students (Ruutmets, 2005). Nation (2001) believes that a large amount of vocabulary could be acquired with the help of vocabulary strategies and that the strategies prove useful for students of different levels. He asserts that:

> Most vocabulary learning strategies can be applied to a wide range of vocabulary and are useful at all stages of vocabulary learning. They also allow learners to take control of learning away from the teacher and allow the teacher to concentrate on other things. Research shows that learners differ greatly in the skill with which they use strategies. For these reasons, it is important to make training in strategy use a planned part of a vocabulary development program (2001, p.222).

Strategy use will result in more effective vocabulary acquisition and recall among L2 learners. According to O'Malley and Chamot (1990, p.7), training second language learners to use learning strategies concentrates mainly on learning vocabulary. They also point out that vocabulary learning strategies are used most frequently and are probably the most well-known type of language learning strategies.

One potential vocabulary learning strategy is the use of etymology. Etymology deals with the origin or derivation of words. In etymological approach, roots, suffixes, and prefixes are the basic elements. In this approach, learner learns about Latin and Greek prefixes, roots, and suffixes and figures out unfamiliar English words by recognizing their etymological structure, the building block from which they are constructed. This kind of knowledge enables learner to construct many English wordscorrectly by learning to put the building blocks (e.g., roots and affixes) together in the proper way and to determine the meanings of thousands of English words that have never seen or heard before (Fekri, 2011). This knowledge enables learners to remember new words much longer than they can remember by just learning unrelated word lists. The development of etymology as word attack strategy is important; researchers have discovered that many English words encountered by L2 learners are not in their oral vocabularies, but according to Nagy and Anderson (1984) and Power and White (1989, as cited in Jean, 1999), the majority of these words are related to more familiar ones through prefixation, suffixation, or compounding.

Etymology knowledge enables learners to both

deepen their present word knowledge and to understand unknown words encountered in the future. Etymology approach teaches the students to identify the meanings of word parts, from which the students can then derive the meaning of the word. Since the majority of English words have been created through the combination of morphemic elements, that is, prefixes and suffixes, and word roots, if learners understand how combinatorial process of morphemic elements works, they will have one of the most powerful understandings essential for vocabulary growth. The purpose of the present study is to investigate the effect of etymology instruction on vocabulary learning of Iranian EFL learners.

REVIEW OF LITERATURE

Etymology talks about the original meanings of root words. For instance, the word "etymology"comes from the Greek word, *etymon*, which means "true sense." The ending, *ology*, comes from *logos* which means "word" and is used in the sense of"to study". Therefore etymology means the study of the true sense and refers to the original meaning of words. In other words "etymology is the study of the origin of words, history, and change in meaning" (Wikipedia, n.d.). In etymology "common factors" are involved in many words, and they help understanding of words and understanding helps remembering better. Some words consist of building blocks that are fit together. Suffix, prefix, and root of words are fundamental elements which are common to many English words. Suffixes and prefixes cannot stand on their own as words (Davoudi & Yousefi, 2009, p.17).

Pierson (1989) claims that etymological training could benefit second language instruction. The teacher and student, by becoming serious amateur etymologists, would find themselves more sensitive to the meaning of words and their relationships with other words from both history and other languages. The knowledge of these word relationships could contribute to what educational psychologists call meaningful learning, a quality of learning which is related to prior learning, and thus is more likely to be retained and generalized to other learning. According to Pierson, instruction in etymology could offer meaningful linguistic information. This information will be helpful for intermediate and advanced second language learners. Ilson (1983, as cited in Gu, 2003) identified four types of etymological information that can help the learner: (a) etyma and cognates; (b) morphological analysis of lexical units in terms of their constituent structure; (c)morphological analysis of lexical units in terms of processes of word formation; and (d) analysis of lexical units in terms of the cognitive procedures (e.g., metaphor) of their formation and development.

Green (1996) asserts that study of Latin or Latin etymology by both native and non-native speakers can be justified on three levels: (a) the great amount of Latin in English language, (b) the psycholinguistic process of storing words, and (c) recent research on learning strategies. Bellemo (1999) in his article titled "Etymology and Vocabulary Development for L2 College Students" demonstrates that etymology may be a viable word attack strategy useful for a college level, heterogeneous reading class, irrespective of the student's L1.S. Zukayee (personal communication, February 1, 2011) believes that etymology is the best method to strengthen learners' command over English language. By using knowledge of familiar words, learners will soon master the secret of vocabulary building. One root word will open the door to mastery of English language. In a similar vein, Corson (1997, as cited in Bellemo, 2009) notes:

> Pedagogical processes of analyzing words into their stems and affixes do seem important in academic word learning. These processes help to embody certain conscious and habitual metacognitive and metalinguistic information that seems useful for word acquisition and use. Getting access to the more concrete roots of Graeco-Latin academic words in this way makes the words more semantically transparent for a language user, by definition. Without this, English academic words will often remain "hard" words whose form and meaning appear alien and bizarre. So this kind of metacognitive development that improves practical knowledge about word etymology and relationships seems very relevant for both L1 [native English speaker] and L2 [non-native English speaker] development (pp. 707-708).

Davoudi and Yousefi (2009) assert that using etymological approach can be considered as a shortcut. Many words in English are made up of prefixes, suffixes, and roots which learner can come to recognize. By learning what the actual roots of the words mean, learner can increase his /her vocabulary at a high rate. They state that there are three important elements in etymology approach that is, prefix, suffix, and root. They note:

> Most of the prefixes and suffixes in modern English derived from old English, Latin, and Greek. They are so numerous that is impossible to list all of them. By learning strategic ones, you take another long stride towards improving your vocabulary. By combining your knowledge of roots with knowledge of prefixes and suffixes you can analyze a surprisingly large number of words" (pp.17-18).

According to Farid (1985, p.7), learning roots can be helpful in two ways: first, when reading one comes across a new word containing the root or prefix, one will be helped in his/her efforts to guess what the word means. S/he will be able to make a good guess by his/herknowledge of prefix or root meaning. Second, learning words in this way makes it easier to remember the definitions of new words. In other words, knowing prefix and root meaning is a good memory aid.It has been estimated that 60 percent of the English words in common use are made up partly or entirely of prefixes or roots derived from Latin and Greek. The value of learning prefixes and roots is that they illustrate the way much of language is constructed. Once learned, they can help learner recognize and

understand many words without resorting to a dictionary. With one well-understood root word as the center, an entire ''constellation'' of words can be built up. Bellemo (2009) notes that moving along the word frequency continuum from more frequent to less frequent displays an increased percentage of Graco-Latin words, while the percentage of Germanic, monosyllabic words decreases. It is in the academic area that students will come across an influx of content specific vocabulary throughout the curriculum. Recognizing frequent roots and affixes that transfer among the discipline can support students as they make sense and attempt to retain the meaning of these deluge new words.

Zhou (2010)contends that knowledge of frequently recurring roots, prefixes, suffixes, infixes when used in conjunction with context clues, can give students another important self-help technique to unlock the meanings of words. Students can be taught Greek and Latin stems and affixes that supply clues to meaning.When teachers give students a working stock of common Greek and Latin word parts and teach them to use these in combination with context revelation, they are helping them acquire meanings of many related English words. They are giving many of them a self-help technique through structural analysis. Rivers (1981) also, states that knowledge of lexical roots (etymological information and morphological origins) can assist in vocabulary development in that it helps students predicate or guess what a word means, elucidate why a word is spelt the way it is, and remember the word by knowing how its current meaning develops from its morphological roots. Students should learn to identify morphemes which recur in a number of words and which can help them to identify at least part of the meaning, thus assisting them in guessing from context the meaning of apparently new items (p.465).

Unfortunately many underprepared readers lack basic knowledge of word origins or etymology (e.g., Latin and Greek roots) as well as discrete understanding of how a prefix or suffix can alter the meaning of word. Fekri (2011)) believe that learning clusters of words that share a common origin can help students to recall words faster. This process helps learners to understand content area and connect new words to those already known. It is concluded that this strategy is considered, as Schemata. According to schemata theory, knowledge is stored in related units that can be recalled and activated on incoming information. Schemata theory assumes that readers use a process of *semantic constructivity* to create meaning from a written or spoken text, which itself has no meaning (Anderson, 1984). So the knowledge of word parts and their meanings help learner to activate this knowledge whenever s/he encounters new words. Similarly, Corson (1997, as cited in Yamazaki & Yamazaki, 2006) asserts that psycholinguistic research on word storage and retrieval indicates that there are different ways the brain can input vocabulary. It can store words individually without any connection to other words, as in rote learning. Through this process it will separately store the words "spectacle," "circumspect," "retrospective," and "inspection," and call each of them up individually for use. A second method of storage is by grouping words according to meaning of semantically and orthographically similar word parts. If the language learner is aware that the Latin stem "spect" means "look" and can recognize the common thread of meaning in the following words, "spectacle" (something to look at), "circumspect" (careful to look around), "retrospective" (concerned with looking back), and "inspection" (a looking into), s/he will store the words together under the root "spect" and add words to this grouping over time. S/he can also call up any word under this category more quickly than words stored individually, resulting in their more frequent use and likely retention. This type of mental organization occurs when Latin or Latin-based words are learned along with the meanings of their parts.

Although most words can be decomposed into root words, prefixes, and suffixes, the degree to which these components specify the meaning of the whole varies widely. Shu, Anderson, and Zhang (1995, as cited in Mohsenifar, 2007) introduce two major categories of words. First, the meaning of some words can easily be determined on the basis of the word parts with little or no help from context (morphologically transparent words). Second, at the other extreme are words for which the components contribute almost nothing to the meaning (morphologically opaque words). In general, most words fall in between; although their meanings cannot be derived solely on the basis of word parts, their meanings are likely to be clear when they appear in even a moderately helpful context.

Holmes and Keffer (1995) in a study titled "A Computerized Method to Teach Latin and Greek Root Words: Effect on Verbal SAT Scores,"demonstrates that the teaching of Latin has a uniformly positive effect on English verbal skills. The research also demonstrates that knowledge of Latin and Greek root words improves the English skills of students through a broad range of grade levels. Also, Villegas' (2008) experimental study was built on the assumption that multimedia environments in language degree curriculum, especially in etymologies' subject might provide learners with a different strategy to help students to increase their knowledge of English. The effectiveness of the multimedia environment was hypothesized to depend on one variable: English proficiency level of learners in a classroom environment using multimedia software with respect to their understanding of English Latin roots. The quantitative findings of this study provided support for the effectiveness of the application of multimedia environments in etymologies' subject with diversity in the English proficiency level of learners. Results from the qualitative instruments provided indications that learners'

attitudes and interest in the Latin/Greek roots learning were dependent on the learning condition they were exposed to. Belloomo (1999) conducted an experiment on word parts with Latin-based learners and non-Latined learners. Bellomo's (1999) experiment indicated that both the treatment groups with Latin-based native languages and those with non-Latin-based first languages learned equally well from implicit vocabulary instruction utilizing word parts despite the pretest difference in favor of the former group due to Latin cognates. Baumann et al. (2002) examined the effectiveness of contextualized word analysis with three groups. One group received instruction in prefixes, another group received instruction in context clue and prefixes. The third group was a control group. In general, those who had received instruction in word parts either combined with context or taught separately, outperformed the control group in vocabulary knowledge.

RESEARCH QUETIONS AND DESIGN

Research Questions

In order to investigate the effects of the etymology approach for vocabulary learning, the following research questions were generated:

1. What is the effect of etymology instructionas vocabulary strategyon vocabulary learning of upper-intermediate EFL learners?

2.Is there any difference between the performance of male and female EFL learnersin learning vocabulary through etymology strategy?

Based on the research questions, the following hypotheses were generated:

1. Etymology instruction as vocabulary strategy has no effect on vocabulary learning ofupper- intermediate EFL learners.

2. There is no difference between male and female learners' performance in learning vocabulary through etymology strategy.

Research Design

This study used an experimental design. Two groups were used. Participants were randomly assigned to an experimental group and a control group. Both groups received a pretest and a posttest. Only the experimental group received the treatment.

METHOD

Participants

Seventy eight EFL learners from SabzevarTarbiatMoa llemUniversity and SabzevarPayame-NoorUniversity participated in the study. They were Persian speakers studying English either as English translation or English literature as their major. All the students were given a Test of English Language Proficiency (i.e., TOEFL, version,

2001) to determine their level of English proficiency. On the basis of their scores, they were divided into low proficiency and high proficiency levels. Out of seventy eight students, only sixty students whose scores were one standard deviation above and below the mean were selected. On the basis of this criterion, they were considered as learners of upper-intermediate level of language proficiency. They were randomly assigned to a control group and an experimental group. In each group, 9 students were males and 21 students were females. Students in the experimental group were provided with tables of roots, suffixes, and prefixes. Only Students in experimental group practiced the application of affixes in identifying the meaning of words.

Procedure

On the first session of the course, the researcher introduced the etymology approach to learners. Only the students in the experimental group were taught etymology strategy. The training course was composed of 8 successive sessions.Each session lasted about one hour. On the first session, the researcher talked ofthe etymological knowledge, the concept of word formation, the significance of etymology, its merits and demerits, its role in vocabulary learning, and finally practicing this strategy in vocabulary learning. The rest of the session wasallotted to the task of introducing the roots and prefixes, and the way they contributed to vocabulary enhancement. Three tables of most common roots, suffixes, and prefixes (Appendix A) developed by Davoudi and Yousefi (2009) were introduced. In each session, about 15 affixes were taught and students were asked to mark taught affixes on their tables.It should be mentioned that the materials were taught by the researcher. A review work followed every four session throughout the study. This section was for recalling of the useful words students studied.

The experimental-group students were asked to follow two steps when trying to find out the definition of an unknown word:

1. Break the unknown word into parts: This step requires students to be able to recognise prefixes and suffixes when they occur in words.

2. Relate the meaning of the word parts to the meaning of the word: This step requires students to know the meanings of the common word parts. It also requires learners to be able to re-express the definition of a word includeing the meaning of its prefix and, if possible, its root and suffix.

To facilitate students' participation in classroom procedures, teacher gave them some extracts from newspapers or magazines in which novel words have been underlined. Students read andanalyzed them. So they found that by using etymology approach they could understand the meaning of thousands of words which were not seen before. In addition to extracts, students were given worksheets containing matching items or blank

sentence completion to practice roots and affix more. They were also reminded that they might use variant word forms of the roots in the worksheet. In this way, they had a chance to practice using the affixes and roots they learned. This procedure went on four weeks.

The control group received the same materials (i.e., extracts) except table of roots and worksheet. The etymology strategy was not taught in learning new words. In other words, students in the control group followed traditional vocabulary learning. The learners learned definitions, synonyms, or antonyms of the new words.

RESULTS & FINDINGS

Results of Pretest

The major question addressed in this study was whether the use of etymology strategy would improve Iranian EFL learners' vocabulary learning at the upper-intermediate level of language proficiency. Before the implementation of treatment (i.e., etymology instruction), the researcher administered a researcher-made vocabulary pretest to experimental and control groups in order to compare the two groups'means obtained from the pretest. To capture the initial differences between the two groups' means on

pretest, a t-test was applied. It should be reminded that a t-test is a statistical test which is employed to make sure whether significant (non-chance) differences can be found between two means or not (Riazi, 1999). The results appear in Tables 1 and 2. Based on Table 1, the means of experimental group and control group are 36.17, 33.83, respectively. Based on Table 2, the results obtained from t-test revealed that the two groups did not differ significantly in their performance on the pre-test at .05 level of significance. The degree of structural significance .060 is more than α=.05. So there is no significant difference between experimental and control groups from their overall performance point of view.

Table 1
Descriptive Statistics for Pretest Results on Vocabulary Test for Both Groups

Group	Mean	N	Std. Deviation	Std. Error Mean
E	36.17	30	4.807	.878
C	33.83	30	4.371	.798

E = Experimental group
C = Control group
N = Number of participants
Std = Standard

Table 2
Independent Samples T-Test

Pretest difference	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
E-C	2.33	6.530	1.192	-.11	4.77	1.957	29	.060*

E = Experimental group
C = Control group
Std = Standard deviation
T = Computed value for t
Df=Degree of freedom
Sig (2-tailed) = Structural significance (2-tailed)

Results of Posttest for Both Groups

In order to see whether the treatment given to the experimental grouphad caused any significant change in this group and to see if the participants in this group had performed significantly different on the posttest, another independent t-test was run. The results obtained from this statistical test are presented in Table 3 below. The independent sample t-test demonstrated in Table 4 indicated that the mean difference between the experimental and control groups' scores measured at the time of posttest was significant. There is, in fact, a mean difference of 3.23 points between the means of the two groups.As Table 4 shows, the level of significant .029 is greater than the probability value, P-value = 0.029> α =.05.

This indicates that the experimental group outperformed the control group. In other words, it reveals that the treatment givenhad affected the experimental group.

Table 3
Descriptive Statistics for Posttest

Group	Mean	N	Std. Deviation	Std. Error Mean
E	38.93	30	5.258	.960
C	35.70	30	5.670	1.035

E = Experimental group
C = Control group
N = Number of participants
Std = Standard

Table 4
Independent Samples T-Test

Pretest difference	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
E C	3.23	7.709	1.407	.35	6.11	2.297	29	.029*

E = Experimental group
C = Control group
Std = Standard
T = Computed value for t
Df = Degree of freedom
Sig = Significance

Results of the Second Hypothesis

The means of males and females' scores on pretest and posttest are shown in Tables 5 and 6. As far as the influence of gender is concerned, there was significant difference between the mean scores of the males and females on posttest. The mean of the males was found 42.1 and that of females was 37.13. As it is clear from Table 6, significant t value was observed (P-value=.008> α =.05) indicating that gender did have an influence on posttest scores. It was found that males, compared to females, scored higher on the vocabulary test.As illustrated in Table7, the P-value, at 0.05 level of significance and 28 degrees of freedom, was 0.008. Thus, the P-value was much greater than the critical value (α). Therefore, the second null hypothesis stating that there is no difference in males and females' performance in learning vocabulary via etymology strategy can be rejected. That is, the results show that males outperformed the females in learning vocabulary via etymology.

Table 5
Descriptive Statistics for Experimental Participants Based on their Gender in Pretest

Gender	N	Minimum	Maximum	Mean	Std. Deviation
Male	9	32.00	46.00	36.4444	5.00278
Female	21	27.00	45.00	36.0476	4.84227
Valid N (listwise)	9				

N = Number of participants
Std = Standard

Table 6
Descriptive Statistics for Experimental Participants Based on their Gender in Posttest

Gender	N	Mean	Std. Deviation	Std. Error Mean
Male	9	42.67	3.873	1.291
Female	21	37.33	5.013	1.094

N = Number of participants
Std = Standard

Table 7
Independent Samples T-Test Comparing the Males and Females' Performance in Experimental Group

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	.471	.498	2.839	28	.008*	5.33	1.879	1.485	9.182
Equal variances not assumed			3.152	19.577	.005	5.33	1.692	1.799	8.868

F = Fisher's F ratio
T = Observed statistics
Sig = Significance
Df = Degree of freedom

DISCUSSION AND CONCLUSION

The data from this study indicate that students in experimental group significantly outperformed the students in control group in vocabulary learning through the etymology method. This finding is in line with previous research findings (i.e., Fekri, 2011) concerning the effect of etymology in enhancing vocabulary learning. In other words, thetreatment given to the experimental group had affected this group to some extent. Therefore, the first null hypothesis stating that etymology strategy

has no effect on vocabulary learning was rejected.

The statistical analysis of the second research question depicts that there is significant difference between the performance of male and femaleparticipants, therefore the second null hypothesis stating that there is no difference between the performance of male and femaleparticipants was rejected. It displays that males, compared to females, scored higher on the vocabulary test. It seems that males took more advantage of the roots and affixes training given to the experimental class. It is worth mentioning thatto dateno study has been conducted to compare the performance of males and females in learning vocabulary via etymology. Previous studies have been conducted on the interaction between gender and overall strategy use or broad categories of strategies.

Gender is obviously seen as one of the major factors that influences language learning (Gu, 2002). Oxford and Ehrman (1995) argue that teachers and researchers should keep trying to understand gender differences and should understand that gender differences may often be a mask for deeper differences of personality type and career choice. They also assert that males and females should be encouraged and allowed to develop the most effective learning approaches theycan, and neither should be pushed into a gender-stereotyped set of strategies.

One of the interesting results of this study was that, students were able to recognize the meaning of prefixes faster and better than the other affixes. It might be claimed that since prefixes occur at the beginning of the word, they are recognized easily. It was clear that only those words which can be analyzed are learned through the application of this strategy. It seems that not all words can be learned through this approach; however the technical terms and jargons are more prone to be acquired in this way. As Mirhassani and Davoudi (1996, as cited in Fekri, 2011) state, those words which are related to science and technology are more susceptible to be learned by the use of etymology because they are usually coined by the specialists with a keen eye in regard to generative, potential power of a certain number of well-known Greco/Latin roots and affixes in every field of study. They believe that these words are normally longer words and contained more affixes as compared to the general vocabulary of language. It could be claimed that etymology strategy is more promising for fields of study such as biology, medicine, botany, psychology, and other specific-content fields. Generally speaking, the findings of the present study indicate that etymology strategy instruction has a positive effect on vocabulary learning of EFL learners. In other words, training in etymology strategy as one of the effective vocabulary learning strategies, allows learners to learn and recall more words. The results of this research also indicate that there is an interaction between gender and learning vocabulary via etymology.

Like any other study this research has certain limitations. The limitations are as the following:

1.Time for intervention was limited. The treatment was conducted over four weeks.

2. The individuals who participated in this study were only 60, which is not enough to confidently generalize the results.

Further experimental research is needed to establish a standardized model for etymology instruction, that is, what teaching strategies are most suitable for teaching roots and affixes. One could, for instance, investigate using flash cards or using software in teaching etymology. Also, further research is needed to explore how many prefixes and roots to teach, at what order to teach, and at what grade levels. Another research is needed to prove the generalizability of this study and to refine teaching strategies. Another area for future research would be to explore the duration and intensity of intervention to determine maximum effect. Teachers can try different amounts of time and intensity to determine what will best suit their particular students. The participants for this study consisted of college students majoring in English; a new study could use participants' of diverse age groups and diverse majors (e.g., college non-English major and high school students). Another study could investigate the effect of teaching etymology on English spelling as well. Last but not least, one could investigate learners' attitude toward learning roots and affixes for enhancing vocabulary.

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