International Journal of Educational Spectrum

Uluslararası Eğitim Spektrumu Dergisi

THE EFFECTS OF TEACHING WORD ROOTS ON THE LONG TERM RETENTION OF ENGLISH VOCABULARY

KELİME KÖKLERİ ÖĞRETİMİNİN İNGİLİZCE KELİMELERİN UZUN VADEDE AKILDA KALICILIĞI ÜZERİNE ETKİSİ

Kenan AKARSLAN[1]

Hasan BEDİR[2]

Abstract

Vocabulary learning experience seems to be the most time consuming aspect of language learning. Learners exert considerable energy on words trying to memorize isolate words and sets of exam words which are, in most cases, bound to be forgotten. There are various learning strategies adopted by learners of English to memorize and retain words. Dissecting words into word parts is among these although there are few studies dwelling on the benefits of teaching word roots. Those few studies highlight the effectiveness of teaching and learning vocabulary through Latin and Greek roots. However, they lack any answers as to how much this strategy works in terms of retention in the long run. The aim of this study is to show the impact of teaching word roots both on learners' attitudes and the long term retention of newly learnt lexical items. A quantitatively supported descriptive study was administered throughout the study.

Özet

Kelime öğrenme deneyimi dil öğrenmenin en zaman alıcı yönü gibi görünmektedir. Öğrenciler, her şeye rağmen çoğu halde unutacakları, listeler halinde bağımsız kelimeleri ve sınav kelime listelerini ezberlemek için muazzam enerji harcamaktadır. Kelimeleri ezberlemek ve akılda tutmak için öğrencilerin benimsediği farklı öğrenme stratejileri mevcuttur. Kelimeleri parçalarına ayırmak bunlardan bir tanesi olsa da kelime kökleri ile öğrenmenin faydaları üzerine az sayıda çalışma vardır. Az sayıdaki bu çalışmalar Latin ve Yunan kökleriyle kelime öğretme ve öğrenmenin etkiliğini vurgular. Ancak, bu çalışmalarda bu stratejinin uzun dönem kalıcılık üzerine etkisi görülememektedir. Bu araştırmanın amacı kelime köklerinin yeni öğrenilen kelimelerin uzun vadede akılda kalıcılığı ve öğrencilerin yaklaşımları üzerine etkisini incelemektir. Araştırma boyunca nitel verilerle destekli betimsel çalışılmıştır.

Key Words: retention of words, teaching English vocabulary, teaching Latin and Greek word roots.

Anahtar Kelimeler: kelimelerin hafızada tutulması, İngilizce kelime öğretimi, Latince ve Yunanca kelime kökleri öğretimi.

1. Lecturer, Adana Science and Technology University, Turkey, kakarslan@adanabtu.edu.tr, ORCID: 0000-0001-9022-2472
2. Assoc.Dr., Çukurova University, Turkey, hbedir@cu.edu.tr, ORCID: 0000-0001-7456-8748

1.Introduction

Learning vocabulary is accepted to be the fundamental part of 'mastering a language, and text comprehension or production' that relies more on the amount of vocabulary known (Teng, 2015). According to Fan (2003), vocabulary knowledge is the most crucial part of learning a language. As can be deduced from these remarks, learning vocabulary has often had its significant place within the learning environment due to its fundamental part in languages. Different methods have, therefore, included and affected the teaching of words with differing width of focus.

Teaching vocabulary has been affected by different approaches to teaching. In Grammar Translation Method era, for instance, vocabulary teaching was based primarily on rote learning or repetition with the ultimate aim of translating literary texts. According to Patel & Jain (2008), "Students are expected to attain high standards in translation". Knowing the L1 (native language) equivalent of a word was the starting point of translation. However, knowing a word is more than knowing the L1 translation of it.

A more recent naturalistic approach adopted implicit teaching of words in an indirect way that takes as example the process of learning a language in a natural way. In other words, children acquire their mother language through listening, speaking and then reading and writing. This process is a long time and children are not supposed to speak the language within a limited period. Children learn at their own pace. They may also make many mistakes which are considered as lovely and cute by parents. Such a naturalistic method as this that adopts the principles of children's learning process seems plausible at first sight, however, it is criticized in that it is a slow and inefficient process for vocabulary learning.

According to Nation (2013), vocabulary has two dimensions: the breadth and depth of vocabulary knowledge. The number of words known by a learner or size of vocabulary, in other words, is related to the breadth while, as stated in Quian (2002), knowing the pronunciation, meaning, spelling, register, morphology, syntactic and collocational knowledge is related to the depth of knowing a word.

Either via old or new methods, vocabulary learning experience seems to be the most time consuming aspect of language learning. Learners exert considerable energy on words trying to memorize especially isolate words like sets of exam words which are, in most cases, bound to be forgotten. Oxford and Scarcella (1994), support that memorizing 'de-contextualized' words may support their test scores but the words will be forgotten quickly. Therefore, it is important for many language learners to learn, memorize or retain words for their future studies or jobs. Reasons may vary but one thing is for sure that people still seek for ways of effective retention of words.

Dissecting words into word parts can be integrated into categories of vocabulary learning strategies. There are few studies dwelling on the efficiency of teaching word roots, though. Those few studies highlight the effectiveness of teaching and learning vocabulary through Latin and Greek roots (Bellomo, 2005, 2009; Karlıova, 2009; Akarslan, 2013). However, these studies lack answers as to how efficiently this strategy works in terms of retention of new words in the long run.

Aim of the Study

The aim of this study is to show the effectiveness of teaching word roots on the long term retention of newly learnt lexical items and secondarily to see any impacts of word roots teaching on learners. In other words, the goal is to observe changes, if any, in learners' attitudes towards the word root teaching method.This study set out to find answers to the following questions:

1. Does teaching EFL vocabulary through root strategies have a significant impact on learners' long term vocabulary retention?

2. Does teaching EFL vocabulary through root strategies have a significant impact on learners' attitude on vocabulary learning?

2. Methodology

Both qualitative and quantitative data collection were used in the study. A quantitatively supported descriptive approach to the study was adopted and administered throughout the study. In other words, Mixed-type research design was used. The study was piloted one year before its administration. The weak and strong sides were observed and tried to be adjusted. Student diaries, instructor observations, open ended questions in pre- and post-tests and face-to-face interviews provided the data to the researcher. Some numerical data were also gathered to gauge the contributors' level of vocabulary and grammar using multiple choice tests and rubrics whose details are provided below. More data were collected through post- and post-post tests to observe the level of vocabulary retention.

2.1.Participants and Context of the Study

Having to have been postponed for the new academic year, this study was put into action one year after the piloting, and it comprised of two respective stages in which a group of learners were selected using a convenience sampling strategy. Convenience sampling strategy involves "the selection of the most accessible subjects. It is the least costly to the researcher, in terms of time, effort and money, but may result in poor quality data and lacks intellectual credibility" (Marshall, 1996). The learners in this study were the only available volunteers and the institute was not enthusiastic to send the instructors to find other participants in other contexts as the instructors were expected to stick to the priorities of the institution. In other words, neither time nor place was available due to restrictions of the weekly program of the classes in the university. This strategy has some other disadvantages than 'poor quality data and intellectual data', too. According to Farrokhi and Mahmoudi-Hamidabad (2012), "Groups chosen by convenience sampling are conducive to self-selection, administrative decision, time of the class, number of the years of exposure and many other polluting influences." All these factors also comprise the limitation to the study. A whole class of Translation Studies foundation year students between 17-26 were requested to contribute to the research with the consent of the institution. Having been asked to volunteer in the study, all members of the group were, then, asked to tick and write the English or Turkish meaning of sixty words in a list of words prepared beforehand. They selected words they did not know from the list of advanced vocabulary items. Of all, only the completely unknown words were shortlisted to be taught. That is, thirty words that are completely unknown to all students were selected to be taught through word roots. The aim was to make sure, as much as possible, that the contributors do not know or have the probability to encounter and learn these words during their normal English classes. It can, therefore, be concluded that they did learn these words only in this study. It is also considered as a pre-test that proves that the score of all learners is 0 %. In order to see really that students did not know any of the shortlisted words, they were provided with a renewed list of 30 words shortlisted requiring them to write down the meaning of these words. A multiple choice test was not preferred as it involved the risk that students might select answers randomly even if they did not know the meaning of a word. It was clearly seen that none of the words were known by any of the students before the instruction.

2.2. Instruments

The second stage started with The Michigan Test of English Language Proficiency (MTELP). MTELP was prepared by A. Corrigan et al and copyrighted in 1979 by the Testing and Certification Division, English Language Institute, The University of Michigan was

implemented to see the level of the group. The test consists of 100 multiple-choice questions. Questions 41-80 (40 in total) in MTELP aim to measure vocabulary knowledge.

Then, the period which involves instruction of new lexical items started . These were taught primarily through roots, secondarily their English definitions, as well as Turkish equivalents and example sentences. The order the words taught is shown in Table 1.

Table 1

How words were taught in the instructional period

1	Abhor	Nefretetmek	Abhor- verb find repugnant, hate
		HOR: hate (HORible)	She abhors any form of cruelty towards animals.

3. Findings

3.1. Findings of the MTELP, post (immediate) and post-post-(delayed) tests

The number of volunteers was 16 throughout the study. In order to see the level of homogeneity within the group, they have been sat in a Michigan Test of English Language Proficiency (MTELP).The results are shown on the tables 3 and 4 below:

Table 2

The Total Number Of Volunteers Who Took The Test

Data Tool	Participants					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Michigan Test	19	100 %	0	0 %	19	100 %

Table 3
The Means and Standard Deviation Within the Group

Data Tool	Report		
	Mean	N	Std. Deviation
Michigan Test	42.21	19	8,5

Table 2 and 3 above show that of all 19 contributors, 100% have finished the test completely. They have answered as many questions as they could. The average overall score in the MTELP was 42 % with the lowest score of 31 % and the highest of 61 %. When only the vocabulary part was taken into consideration it was seen that the lowest score was 18% whereas the highest score was 58 % which is pretty consistent with the overall scores. The overall score of 42 % implies that the learners are between A2 and B1 levels according to CEFR equivalencies estimated by CambridgeMichigan (2017). It is important to note that "There has not yet been a formal CEFR standard-setting study conducted for the MTELP Series itself." which implies that these equivalencies are only estimations. The students took a non-standardized proficiency test in their university at the beginning of the year and were all below the 80% level stipulated by the institution to be eligible to pass the preparation year.

The amount of the standard deviation (Std. dev.= 8,5) in the second table shows that the group is heterogeneous. This was not what the writer of this study aimed for at the beginning of the study as it was meant to see what the method promised within a

homogeneous group. Later, it had to be accepted that it was impossible to gather a group of learners with the same background in terms of language education.

Then, to stimulate homogeneity of lexical knowledge as much as possible, 30 academic words that none of the members of the group knew were selected with a procedure mentioned in the previous chapter. It was made sure that all words were unknown to them with a form including a word list which included contributors to check the words they know or familiar with in any way and vice versa. Words which were checked as 'I definitely know the word/I know the word/I am not sure' were eliminated. Only those checked as 'I do not know the word/I definitely do not know the word' were shortlisted to be integrated into the instruction program.

The researcher did not include himself directly in the instructional period with the fear that he could affect the learning process by emphasizing the method in favor of other learning styles and strategies. It was important to see what learners think or how they would be affected by the method. Otherwise, it would be less probable to see the real effect on them. A colleague was asked to teach them the new words. He was made aware that word-root teaching should not be overemphasized in favor of others and learners should be allowed to notice the new method and choose if they would prefer in their future learning.

Table 4

Comparison of average scores in percentages 1

AVERAGE SCORES COMPARISON TABLE (%)				
MTELP OVERALL SCORE (%)	**MTELP VOCABULARY SCORE (%)**	**POST-TEST (Immediate Test) See Appendix 2**		
		attempts	fully correct (**) (meaning + example sentence provided)	partly correct (*o or *x) (only the meaning provided correctly)
		46 %	17 %	20 %
42	39.5	**POST-POST TEST (Delayed Test) See Appendix 2**		
		attempts	fully correct (**)	partly correct (*o or *x)
		74 %	72 %	41 %

Table 4 shows the average scores of learners in different tests applied before and after the instruction of words. On the left columns of the table the average scores attained in the MTELP is shown. 42 % is the general achievement level of all students who took the test. 39,5 % is the level of achievement when only the vocabulary part is considered.

In the post test, learners tried to write the meaning (in Turkish or English) and an example sentence for a word which is encoded as 'attempts' in the table. In other words, if a

student tried to write something, even if it is incorrect, it was considered as an attempt to answer it. The table, therefore, clarifies that 46 % of the students tried to write an answer in the post-test, whereas the number increases dramatically to 74 %. The percentage of fully correct answers rises from 17 to 72 in the post-post test which shows quite a big increase and gap between the immediate and delayed test. The percentage of partly correct answers rises from 20 to 41 in the post-post test.

The answer to the first research question, "Does teaching EFL vocabulary through root strategies have a significant impact on learners' long term vocabulary retention?" could be "Yes."; however, these results pose a problem: The results suggest that learners' success was a lot better than their post-test scores even though little time had past when they took the test. As the immediate test was applied after the instructional period, it is expected to be higher than the post-post or delayed test which was sat one month later. The results need a deeper attention for this anomaly. The amount of rise in success is to be analysed further: What really made the figures go up so drastically? The table in four, as discussed in the previous chapters, might be providing some deceptive data. Such a big difference between two tests looks unreasonable. The results look low after the instructional period; however, they rise up to high levels. When their diaries, answers in their interviews and in the post test form were analysed, several factors were observed to have affected the scores.

First of all, a few students noted that they had not attended some classes before the post test but studied the words they missed afterwards. These answers may show that if they had been taught the words they missed during normal instructional period, the results of the post test would have been higher. The difference between the two tests would have been lower. Considering the attendance of students, those who have missed more than two classes have been eliminated from the analysis of the MTELP, post-test (immediate) and post-post test (delayed). Six learners were eliminated from the analyses. These contributors had studied the words after the instruction period which resulted in the low scores in the post test but high scores in the post-post test. However, their diaries and answers to the open ended questions in the tests were included in the analyses to seek for the answers to the second research question.

Table 5

Comparison of Average Scores in Percentages 2

AVERAGE SCORES COMPARISON TABLE (%)				
MTELP OVERALL SCORE (%)	**MTELP VOCABULARY SCORE (%)**	**POST-TEST (Immediate Test) See Appendix 2**		
		attempts	fully correct (**) (meaning example sentence provided) +	partly correct (*o or *x) (only the meaning provided correctly)
		57 %	44 %	20 %
40.3	38.7	**POST-POST TEST (Delayed Test) See Appendix 2**		
		attempts	fully correct (**)	partly correct (*o or *x)
		54 %	42.3 %	18 %

Table 5 was redesigned after the elimination of non-attendant students. Diaries, answers to the open ended questions and interview transcriptions were revisited to understand if there are any learners who studied words after the instructional period as it could affect the reliability of the method. Table 5 shows the average scores of learners in different tests applied before and after the instruction of words. The overall score of the MTELP decreased from 42% to 40,3 whereas the vocabulary score to 38,7. There are slight differences between the scores attained in post and post-post tests. The implications of these results will further be discussed in the discussions part.

3.2. Findings of Diaries and Questionnaires

The attendance problem and its effects were not the only factor in the huge difference between the tests. Another factor affecting the high amount of difference in scores might be the students' change of attitudes towards the words asked in the tests. Some students were prejudiced against these words as they thought they would never see these lexical items in their daily lives. They had emphasized that these words were too academic and difficult to learn. It was observed that their attitudes changed not solely because of the root word instruction but the belief that they would come accross these words in their business life as some aimed to be translators. They soon noticed, during their normal classes, that they needed a wide range of words be it daily or academic. They took the words more seriously and they attempted more to answer the questions. They utilized their learning styles and strategies more and the level of success has arisen. Many of them confesses that they had focused on the words more.

Another factor is directly related to the method. One student (S.12) wrote in her diary that the root-method was completely useless. However, in her comment in the delayed test she changed her view and wrote: "It is really fun and beneficial to find the meaning by looking at the roots but to do this, we need to know the structure of languages they come from…" This and other similar answers support a change in their attitudes, too.

Most of the learners selected had no negative attitudes towards the method. Three students had negative attitudes and two others wrote no comment. One participant changed her attitude (S.14) completely. She had commented, "Trying to find the meaning of a word by looking at the roots is really nonsense. This method is useless and there is very little retention. Instead, it will be more effective to repeat the words continuously either in the class or individually." Her comment in the post-post test was "Learning words with roots gives me a different point of view. I think it would be better to give examples which will help remember and make connections with the word."

One other student made no comments in the post-post test. He had commented in post test that the study could have been made more effective and he could not remember the words and it was not a creative way to remember words. In his interview, he said he was not negative towards the method and added that he liked to deal with words this way if accompanied by other learning methods.

Another student's comment in the post test was as follows: "I feel that I will forget all the information as the words pile up without really learning the words you taught previously." A reading text in which we can guess the meaning of the words might be useful in learning the words." Unfortunately, the negative attitude of this learner has not changed in the duration of the course. Her second comment in post-post test was "I find the procedure weak. Repeating a word after learning and making no connections with our [normal] classes hampers the retention and learning of these words."

Parallel to their positive and negative changes in their attitudes towards the method, the learners made some additional remarks or suggestions as well. Some recommended that other methods, techniques and strategies accompanied this method such as learning through songs, word games such as taboo, sparing more time for vocabulary in classes, repeating words more, learning antonyms/synonyms, reading passages including the words learned, and choosing more daily words to learn. These factors their implications will be discussed in the following.

4. Conclusion

The study aimed to see the effects of word roots teaching on long-term retention of newly learnt words. It was conducted with 19 participants over 10 weeks after another over-ten-week piloting with students studying at the SFL of Adana Science and Technology University, Adana, Turkey during the 2016-2017 Fall term. Only 16 learners completed the study. The participants were taught 30 advanced words that they did not know which was made sure by a pre-test. Then, they were asked to take a post- and post-post-test to see the changes in their scores which would show the effects of word root teaching. They were also asked to write diaries during the process. The instructor was also requested to share his views and observations in this period.

As a result, the findings indicated that teaching words through word roots may provide a very useful tool for learners to learn new words. Learners' were observed to be positive against the method which was motivating for them and providing them with a meaningful learning environment.

Another important point is that learners have different learning styles and strategies that implies the inefficiency of any methods alone. Therefore, even if a specific method is more effective than another, it does not necessarily mean that other methods, techniques,

learning styles or strategies be neglected. An ideal learning environment should include all of them moderately. However, it was observed that participants were not aware of such a method and were happy to have another tool to use in their language studies. It is also promising to see that the participant are aware that they have to exert effort even if a method makes retention and recall of words easier.

According to Nation (2012), instructional environments should " include noticing (through formal instruction, negotiation, the need to comprehend or produce, awareness of inefficiencies), retrieval and creative (generative) use." Considering his ideas, it can be said that method includes the negotiation of meaning together with formal instruction. Learners may feel the need to analyse unknown or even the known words to see if the method works for them. When the 'retrieval' point is considered, it was observed that participants could remember new highly academic words with a higher percentage. When learners' example sentences were regarded, it was seen that participants can use the new words generatively, too.

5. Limitations and Recommendations for Further Studies

This study has tried to understand the long term effects of teaching words through the instruction of roots. It has been observed that word roots have some positive effects on the retention, recall and use of words as they provide a foundation to guess words and relate difficult words to easy relative words. Many restrictions throughout the study weakens the reliability of the results. Despite every effort to overcome any weaknesses, some were not thoroughly ridded of as there were some inevitable limitations to this study.

One weak point of the study was that the administration of the study was limited to teenagers at preparatory year classes in Adana Science and Technology University. The results, therefore, will not be comprehensive enough to draw general conclusions. For instance, it is impossible, with this study, to guess possible effects of this method on children or adults. The answers to the question of how to teach learners of different ages may be discussed in detail in future papers.

Another limitation about the present study is that the number of available students was 30 at the beginning but only 16 participants attended the study regularly which renders the possible results questionable in terms of reliability and comprehensiveness even within this age group. Future studies must include, if possible, more participants to contribute to the reliability and the scope. A further study should bear this in mind that more number of attendants are needed to boost the reliability.

A third limitation was that words chosen to be instructed were deemed as impractical by some learners because they were selected from highly academic and rare words. A student suggested that they come across "words that could be used more in daily life". Similarly, another one recommended us to "use more up-to-date words." He added that "instead of 'dodecagon', a more academic or up-to-date word could have been taught." However, some students uttered that as they are prospective translators, businessmen or scientists and they could encounter any of these words in their professional life, and concluded that they should not complain about this issue. These words were selected lest the learners should come across and learn them without being instructed through roots. Therefore, future studies may include words that might be shortlisted considering an high academic level but more frequent words

Next, students were not given any vocabulary learning strategies instruction before the beginning of the study. In the future, researchers might prefer to show what this technique actually is. In this way, learners may have the opportunity to observe the method better and decide more precisely whether it works for them or not, because it was observed that some students did not even focus on the new technique to be tested. Next, learners were observed to

be more eager to combine different learning styles and strategies, so a study may involve the effects of two or three blended techniques including word roots instruction.

In conclusion, the teachniques used in this study shed light into effective vocabulary teaching since technique alone will not be the answer to the question of learning a new word. Ilson (1983) thinks that studies on word roots give a richer instructional environment. However, memorisation or retention could be boosted by consolidating words through different tasks following the teaching process through various types of activities (Nation, 2013).

References

Cambridge Michigan (2017). CEFR. Retrieved on the 20th of October, 2017 from
http://cambridgemichigan.org/institutions/products-services/tests/placement-progress/mtelp-series/levels-scoring/

Fan, M. (2003). Frequency of use, perceived usefulness, and actual usefulness of second language vocabulary strategies: A study of Hong Kong Learners. *The Modern Language Journal, 83*(2), 222–241.

Farrokhi, F., &Mahmoudi-Hamidabad, A. (2012). Rethinking convenience sampling: Defining quality criteria. *Theory and Practice in Language Studies, 2*(4), 784- 792. Retrieved from: https://search.proquest.com/docview/1328999118?accountid=165093

Ilson, R. (1983). Etymological information: Can it help out our students? *ELT Journal*, *37*(1), 76-82

Marshall, M. N. (1996). Sampling for qualitative research. *Family Practice*, 13(6), 522–526 Retrieved on the 1 January 1996 from https://doi.org/10.1093/fampra/13.6.522.

Nation, I.S.P. (2013). *Learning vocabulary in another language.* Cambridge University Press (Second Edition)

Oxford, R.L. & Scarcella, R.C. (1994). *). Second Language Vocabulary Learning among Adults: State of the Art in Vocabulary Instruction. System 22*(2), 231-43.

Patel, M.F. & Jain, P. M. (2008). *English Language Teaching: (Methods, Tools & Techniques).* Sunrise Publishers & Distributors.

Qian, D.D. (2002). Investigating the relationship between vocabulary knowledge and academic reading comprehension: An assessment perspective. *Language Learning, 52,* 513-536.

Teng, F. (2015). Assessing the Relationship between Vocabulary Learning Strategy Use and Vocabulary Knowledge. *PASAA: Journal Of Language Teaching And Learning In Thailand*, *49,* 39-65.