AWARENESS OF WORD ANALYZABILITY AND ITS ROLE IN EXPANDING LEARNERS' VOCABULARY

Ahmed Hamid Abdulrazzaq

English Department, College of Arts, University of Baghdad

Abstract: *Some linguists (e.g., Bauer, 1983) have claimed that foreign language learners are unaware that English words containing Greek and Latin roots are analyzable into their constituent roots. One purpose of the present study was to assess this claim. A second purpose was to see whether making these learners aware of the analyzability of these words would help them to expand their vocabulary. The final purpose was to find out whether students find the meanings of certain types of such words easier to guess than others. The 30 subjects in this study were pretested, given instruction in analyzing words into their component roots and guessing their meanings, and then posttested. Descriptive and inferential statistics were used to evaluate the hypotheses, and these yielded the following results: (1) advanced Iraqi EFL learners are not aware of the analyzability of this type of words; (2) making these learners aware of this analyzability will enable them to expand their vocabulary considerably; and (3) learners find guessing the meanings of words containing Greek roots easier than those of words containing Latin roots.*

Keywords: *Greek roots, Latin roots, awareness, analyzability, vocabulary learning.*

About the author: *Ahmed Hamid Abdulrazzaq is a lecturer and doctoral student in the Linguistics program at the English Department, College of Arts, University of Baghdad. He holds two master's degrees, an MA in Linguistics from the University of Baghdad, Iraq, and an MSc in TESOL from the University of Exeter, UK, and has 20 years of experience in teaching undergraduate courses in TESOL and Linguistics in the UAE, Iraq and Libya. Abdulrazzaq started his doctoral work in 2020, and his research in linguistics focuses on phonology, morphology, and optimality theory, while his research in TESOL focuses on language teacher education and teacher evaluation.*

e-mail: *a.h.razzaq@gmail.com*   **ORCID iD:** *https://orcid.org/0000-0003-2700-8021*

Introduction

At the advanced level of language learning, students devote considerable time and effort to expanding their vocabulary. Various techniques are thus used to achieve this end.

These techniques include looking up words in dictionaries, trying to guess the meaning from context, and memorizing synonyms and antonyms. Nevertheless, many students feel discouraged as they open their dictionaries and start wondering how they will ever master this vast number of words.

A quick look at words like sympathy, apathy, antipathy, or inspire, expire, respire, etc., however, should have encouraging implications for these students as they realize that thousands of words exist in the English language that need not be mastered as separate units, one by one. They can be learned in groups.

Since so many such words have come into English from Greek and Latin, knowledge of the meaning of Greek and Latin roots provides an organized and economical system of vocabulary building. Such knowledge will help students to acquire a technique for analyzing words systematically. By using this technique, students will be able to work out the meanings of unfamiliar words by analyzing them into their component parts.

Advanced Iraqi EFL learners, however, do not seem to be aware that words containing Greek and Latin roots are analyzable. They seem to treat many of these words as monomorphemic and thus miss an invaluable opportunity to enrich their vocabulary.

Hypotheses

In this study, it is hypothesized that:

1. Advanced Iraqi EFL learners are unaware that English words containing Greek and/or Latin roots are analyzable.

2. Once these learners realize that such words are analyzable, they can expand their vocabulary considerably.

3. These learners find the meanings of words containing Greek roots easier to deduce than those containing Latin roots.

Procedure

The procedures followed consist of:

1. Providing a general background to the study by reviewing the related literature.

2. Conducting a pretest to a sample of advanced EFL students (a) to find out whether these students are aware of the analyzability of English words containing Greek

and Latin roots, and (b) to check their command of this type of vocabulary items,

3. Giving these students some instruction in analyzing words into their component roots and trying to guess their meanings, and then retesting these students to find out (a) whether their vocabulary (in this area) has expanded and (b) whether they find the meanings of words containing Greek roots easier to deduce than those of words containing Latin roots.

4. Statistically analyzing the data provided by the two tests and then interpreting and evaluating the findings of this analysis.

5. Based on the investigation, offering some pedagogical suggestions that can help learners achieve a better standard of vocabulary.

Data

The students' responses to both the pretest and the posttest will constitute the present study's data.

Delimitations

The following are the major delimitations of the study :

1. The sample of learners has been limited to third-year EFL students at the College of Arts, Baghdad University.

2. The teaching materials developed as well as the items of the two tests (apart from Part 1 of the protest) have been limited to the Greek and Latin roots listed in Appendices E and F.

3. The area of students' ability that this research seeks to improve has been delimited to the students' receptive vocabulary.

Significance

The present study is expected to provide empirical evidence for Bauer's (1983) claim that foreign language learners are not aware of the analyzability of this type of words. This study is also expected to validate the employment of students' awareness of the analyzability of English words to expand their vocabulary.

Theoretical Background

The Importance of Classical Elements in Contemporary English

According to Luschnig and Luschnig (1982, p. ix), over 90% of the vast word stock of English is derived, directly or indirectly, from the classical tongues. In a study reported by Kent (1963, p. 56), it was found that out of the 20,000 words

of common use in the English-speaking world, over 60% come from Latin and Greek. Commenting on this study, Kent states that if the list included the rarer words (especially those of science and technology), a still higher percentage would be found since almost all technical terms in every field come from these languages.

Similarly, Roberts (1968, p. 190) states that about 35% of all words in a dictionary with about 120,000 main entries are borrowings from Latin, whereas only 15% of these are native English words. Nist (1966, p. 8) points out that it was mainly borrowing from the classical languages that "swelled the vocabulary ranks of English from the thinly populated Anglo-Saxon (50,000 to 60,000 words) ... to the immense international ... English of today (650,000 to 750,000 words, at least)".

Yet, even though contemporary English is made up of many more words of classical origin than native English words, the latter seem to outnumber in their repetition words of other origins. Accordingly, after examining a number of different texts, Kent (1963, p. 156) concludes that English owes to the classical languages about two-thirds of its vocabulary, that is, of the different words, and about one-sixth to one-third of all words used, without excluding repetitions. Perhaps this is why the native English words are usually looked upon as the bony structure of the language.

Vocabulary expansion
Direct means

Vocabulary expansion is "the process of increasing one's store of words and meanings" (Deighton, 1971, p. 460). For years, the only method used for vocabulary expansion was presenting lists of (often unrelated) words for rote learning. Thus, learners would be provided with long, usually bilingual, word lists and asked to memorize these words along with their meanings. However, this method of presenting lists of words was later rejected as "excessively tedious, wasteful and generally ineffective" (Morris, 1945, p. 37) and was replaced by the so-called *method of association*. According to this method, words should be presented in contexts, not in isolation. Some form of association should be established among these words by using such sense relations as synonymy, antonymy, collocation, etc.

Indirect means

More recently, however, there has been a move away from these direct methods of increasing vocabulary. Specialists of vocabulary teaching are now more in favor of indirect means of learning vocabulary, teaching learners strategies they can use to decode the meanings of words for themselves. According to Twaddell (1973), there is a misconception that vocabulary education is about compiling

lists of words using a criterion such as word frequency. To avoid relying on dictionaries, Twaddell thinks that students should be taught how to use guessing strategies to help them deal with unknown terminology and lessen their reliance on them (Carter, 1988, p. 42).

Similarly, Carter (1988) and Honeyfield (1977) point out that although learning the most frequent 2000-3000 words in a language offers a solid foundation for about 80% of the words likely to be encountered, there would still be some 20% of the words in any unsimplified text that are unknown to the learner.

Moreover, these infrequent words "may be crucial to the meaning of a passage but may occur only once in a chapter or a book" (Honeyfield, 1977). Consequently, Carter (2012, p. 200) stresses the importance of using indirect means for learning such infrequent words and that even though word lists and other direct techniques have their advantages, they will never be able to teach students all the terms they will likely encounter.

To sum up, it has been realized recently that vocabulary expansion involves much more than increasing one's store of words and meanings. Vocabulary expansion must also include what Deighton (1971, p. 460) calls word power, i.e., the power to deal with unfamiliar words and new meanings for old words when they are encountered. In other words, vocabulary expansion comprises knowledge of specific words and specific meanings, as well as the skills required to work out a meaning for a word through the use of context clues and clues provided by word parts. Thus, instead of increasing the learner's store of words, specialists in vocabulary teaching now focus on increasing the learner's potential vocabulary. According to Palmberg (1989, p. 47), a learner's potential vocabulary consists of those words that he has not come across before, either in speech or in writing, but that he, owing to his ability to make lexical inferences, can nevertheless understand when he first encounters them.

Linguists such as Wallace (1982, p. 33) and Carter (1988, p. 166) agree that there are two major resources for expanding the potential vocabulary of EPL learners: a study of context operation and a knowledge of word parts and word formation.

Learning the meanings of words from context is an important method of vocabulary learning (Levine, 1980, p. 1). This method derives its importance from the fact that it is through observation of context that we get most of our understanding of words. We do not get meanings from a dictionary since a dictionary is only "a record of common significations taken from contexts" (Deighton, 1971, p. 467). It is context that always determines which of a word's meanings is intended.

The other method of expanding the learners' potential vocabulary is to teach them how to derive the meanings of unknown words by recognizing their constituent

elements. The basic skill a learner needs in order to find out meanings is to be able to break down a word into its parts. Next, the learner must adapt this literal meaning to the sentence or passage in which the unknown word is used.

The word-analysis method is most rewarding to learners when they deal with words made up of classical elements. This may be attributed to two main factors: (1) the fact that over 75% of all English words are taken from Greek and Latin, and (2) the fact that word families formed with single Old English roots are much more limited than those formed with Greek or Latin roots (Monson, 1968, p. 7).

According to Gairns and Redman (1986, p. 48), the learner's receptive and productive skills would benefit from programs emphasizing word analysis. They add that familiarity with the broad principles of word formation and a few of the more common Greek and Latin roots would be extremely beneficial to the learner's vocabulary. In this respect, Davis (1979, p. 1) notes that the higher the educational level of the speaker or writer, the more the speaker uses classical elements in an effort to deal with fewer but more precise words.

However, specialists in vocabulary teaching, such as Monson (1958, p. 6), point out that this technique is more useful in extending the learners' receptive vocabulary. This may be due to both the more technical nature of this type of word and the fact that learners need to comprehend a much larger number of words than those they could produce.

Various vocabulary-building programs utilizing this technique have been proposed, some relying exclusively on this technique, such as Friend et al. (2014), Luschnig and Luschnig (1982), Ayers (1986), and others using the word-analysis method only as part of a larger program that employs other techniques (such as using context clues) too, e.g., Kruse (1979), Nation (2005), and Jennings et al. (1980). Most of these programs, however, give more or less the same procedure through which students can learn how to get at the meanings of unfamiliar words containing classical elements.

In addition to helping learners decode the meanings of unfamiliar words, a knowledge of the word's internal structure can help these learners retain these meanings. According to Carter (1988, p. 187), this is of particular importance since comprehension of vocabulary relies on strategies that help learners understand words and store them in memory. Thus, Ayers (1986, p. xv) points out that one of the important reasons for learning Greek and Latin is their mnemonic value since knowledge of these elements will serve as "an excellent device for fixing words in the memory once their meanings have been determined."

Method

Subjects of the Study

Thirty advanced Iraqi learners of English were chosen as subjects for this study. These were the third-year students of section B in the English Department, College of Arts, Baghdad University. These students, who have been studying English for the past ten years, served as subjects for the two tests as well as the instructional course.

Design

A one group pretest-posttest design was used for this study (Creswell & Creswell, 2017). In this design, a pretest is given before teaching a course of instruction. This pretest was similar in form and content to the posttest given at the end of the course. The scores on the pretest form a baseline against which one can measure the progress that students have made during the course (Vallette, 1977, p. 14; Gronlund, 1977, p. 2)

The independent variable investigated in this study was the students' awareness of the analyzability of words containing classical roots. This variable involved two levels:

1. Unawareness: students before receiving instruction.

2. Awareness: students after receiving instruction.

The dependent variable, on the other hand, was the students' scores on the posttest.

The Pilot Administration of the Test

A pilot test was conducted approximately ten days before administering the final version of the pretest to the whole sample. The test was given to ten third-year students of English who were chosen randomly. After collecting the answer sheets, a detailed item analysis was conducted to determine how far this test has achieved its objectives.

The pilot administration of the present test has resulted in the following:

1. The instructions of the two parts of the test were found to be satisfactorily clear and were accordingly kept as they were.

2. In Part I, several items proved to be encouraging wild guessing on the part of the testees and were consequently replaced by others.

3. Some of the distracters were found to be non-functioning and were accordingly replaced by others.

4. The number of the test words in Part II was increased in order to add to its reliability.

5. The time to be allowed was limited to 45 minutes.

The Pretest

A pretest was given to students. The main objectives of the pretest were the following:

1. showing if these students are aware of the analyzability of English words containing classical roots,

2. assessing the students' command of this type of vocabulary items,

3. ensuring that these students do not already know the meanings of these test words, since these same words will be used in the posttest,

4. showing (if any) which types of such roots (e.g., Greek vs. Latin) students find easier to recognize.

Since objectives (1) and (4) differed from the other two objectives, the test was divided into two parts. In Part I, which was related to objectives (1) and (4), students were given 20 English words containing classical roots and asked to analyze them into their smallest meaningful components whenever possible. They were also given three illustrative examples, two of which were complex words that were accordingly analyzed, and the third was a simple word that was marked "not analyzable." The rationale for giving this third example word was to make the possibility of finding an unanalyzable word in this test a likely one.

The twenty words chosen for this part of the test were all words the students were already familiar with, and eleven words contained Latin roots, while the remaining nine contained Greek roots. These test words varied from some which contained only one root, such as describe, to others containing two and even three roots, such as anniversary and autobiography.

In Part II, which was related to objectives (2) and (3), students were given 32 English words containing classical roots in a multiple-choice examination. Each of these words was written in a short phrase and was followed by five choices, all of which appeared to be plausible definitions of the underlined words but only one of which was the correct definition. Students were required to write the letter of the item which best defined the underlined word.

The multiple-choice technique was adopted because it had all the advantages of objective testing: wide coverage, reliability, and ease of administration and scoring.

Since the test words of Part II were the same as those in the posttest, the selection of these items will be discussed in detail when describing the posttest.

The Instructional Course

The main objective of the pretest was that when encountering a word containing any of the roots they have been taught, students (by the end of the course) are expected to be able to recognize the constituent elements of such words, recall their literal meanings, and combine these meanings to deduce the overall meaning of the word.

Since teaching all the classical roots in English is not possible, a selection had to be made from among these roots. when selecting the suitable roots for this course, the researcher was guided by the following considerations:

(1) The roots must be productive.

(2) The roots must be commonly used.

(3) The roots can be easily recognized.

Accordingly, it was decided that the 28 bound roots available in Stageberg's (1971) book would be quite suitable for this course since these roots both meet the requirements mentioned above and are already available in the students' textbooks--along with their meanings and examples. These roots varied in productivity from those that were very productive such as spect and geo to those which were far less productive like or, rod and prehend.

The instructional course was typed as a four-page hand-out and distributed to the students. This course was structured following the approach adopted by Friend et al. (2014). Thus, each root in this course was followed by its literal meaning. Then, three example words were given, each followed by (a) its constituent elements and (b) its current meaning.

The instructional course, which took only three lectures, was given to the students in a normal class situation as part of their first-term course in morphology. The lectures were delivered by their course teacher and were attended by the researcher. Before each of these lectures, the researcher and the lecturer would sit together and discuss what would be taught in that lecture. The lecturer was also provided with a list of the words that were used in the test in order to avoid mentioning them in class.

The Posttest

The main objectives of the posttest were the following:

1. showing whether (or not) the vocabulary of these students has increased after realizing that words containing Greek and Latin roots are analyzable,

2. showing whether students find the meanings of words containing certain types of classical roots (e.g., Greek vs. Latin) easier to guess than those of words containing other types of these roots,

3. showing whether these students can use this word-analysis technique in decoding the meanings of other words, the meaning of whose roots was not taught to these students.

Since all precautions were taken to preclude any information leakage in the pretest, and as the pretest had a sufficiently large number of items, it was decided to readminister Part II of the pretest as a posttest.

Accordingly, the posttest consisted of a multiple-choice examination in which students were required to give the meanings of 32 words. As the posttest's third objective differed from the first two objectives, separate test items (items 29-32) were set to evaluate it.

However, the first 28 items of the test were related to objectives 1 and 2. In choosing these items, the researcher has restricted himself to the 28 roots taught to these students. The researcher first made a separate list for every one of these roots, and this list included all the words in which a particular root could be found. After making the lists, one example word for every root was selected, with the following considerations in mind:

1. Students were not likely to have come across these words yet.

2. They had not been taught to the students in the instructional course.

3. Mostly, the roots were recognizable and had undergone no significant phonological or semantic change.

Accordingly, 28 test words were selected, 19 of which contained Latin roots and 9 contained Greek roots. Twenty of these words had undergone no linguistic change, while four had undergone phonological change, and another four had undergone a semantic change.

The final four test words, items 29-32, were related to objective (3). These were words whose roots' literal meaning is presumably unknown to the students. These words were chosen following the same considerations mentioned above, plus the condition that students must have come across other words containing the same roots that compose these words. Thus, the four words were chosen on the assumption that these students have already come across such words as *vivid, dialogue, phonology, mortal*, etc. It may be added here that these 32 test words are quite common in most vocabulary-building books. This means that specialists in teaching vocabulary believe that it is necessary to learn these particular words. Thus, these words constitute a representative sample of this type of vocabulary items.

The Scoring Scheme

For purposes of objectivity and reliability, an accurate scoring scheme was developed for the two tests. According to this scheme, part I of the pretest was scored out of twenty. For each item, there were three possibilities: a zero score (for failing to recognize the root(s) of the test item), a half score (for managing to recognize only one of the roots composing particular items), and one score (for recognizing the root(s) composing any test word).

Part II, and consequently the posttest, was scored out of thirty-two. There were only two possibilities for each item: one score (for choosing the right answer) and zero (for failing to do so). In both tests, blank items were counted as incorrect answers.

To establish content validity, the course objectives were stated in behavioral terms, and then a careful examination of the test material and test items was conducted. It was also seen to it that the test content represented the content of what these students were taught in the instructional course. In other words, care was taken that the test measured clearly defined learning outcomes that are in harmony with the instructional objectives.

To establish reliability, several measures were conducted. First, using an objective test added to the reliability of the test since this type of testing both allows for a wide range of the material to be covered and has a definite scoring scheme. Second, the students were urged to participate seriously and were thus motivated to do their best. Finally, the tasks expected from the testees were made clear both in the test instructions and by explaining them by the examiner during the test administration. In addition, the split-half procedure was adopted in the present study. Accordingly, the test was split into two halves, and the scores on the two halves were compared. After applying the relevant formula and correcting it with the Spearman-Brown correction formula, the test was found to be highly reliable, with a correlation coefficient of 73.1%.

Results and Discussion

The present study was designed to investigate the learners' awareness of the analyzability effect of the EPI of English words containing Greek and Latin roots on increasing their vocabulary. More specifically, it was intended to provide answers to the following questions:

1. Are Iraqi EFL learners aware that English words containing Greek and Latin roots are analyzable?

2. Will these learners be able to increase their vocabulary when they realize that such words are analyzable? If so, how much?

3. Which types of classical bound roots (i.e., Greek vs. Latin, or roots that underwent linguistic change vs. those that did not) do these learners find easier to recognize both before and after realizing that these words are analyzable?

4. Will the training these learners had in recognizing the root and trying to guess the meaning of the word improve their ability to guess the meanings of words containing classical roots other than those they were taught?

To answer the first question, students were given a test in which they were asked to analyze twenty test items into their smallest meaningful components. The students' failure to correctly analyze more than 80% of the test items and their resort to wild guessing indicated that they were unaware of the analyzability. Moreover, the application of the relevant t-test showed that the students' mean score on this part of the test was significantly below the assumed mean score ($t = 109$ p $<.005$). That is, the students' mean score was too low to indicate that they were aware of the analyzability of these words. The results of this part thus support Bauer's (1983, p. 44) claim that "new learners of a language may never consider the underlying motivation of complex forms and treat ... [them] as though they were monomorphemic."

The item analysis of this part of the test showed that the mean level of difficulty (FV) of the items containing Greek roots was three times larger than that of items containing Latin roots. In other words, before taking the instructional course, these students found Greek roots three times easier to recognize than Latin roots. In order to answer the other three questions, however, these students were pretested, given an instructional course, and posttested over one month. The results of the two tests were statistically analyzed on two levels.

First, these results were analyzed in terms of the scores these students obtained on both tests. The low scores (mean score = 19.1%) these students obtained in the pretest, a substantial proportion of which was achieved by wild guessing, revealed not only that they did not know the meanings of most of these test words but also that they did not know how to deal with them, i.e., how to tease out their meanings.

Three implications were derived from this. In the first place, the ability of these students, and consequently Iraqi EFL learners, to deduce the meanings of English words containing Greek and Latin roots was very weak. Second, these results coincided with those of Part I in showing that these students were not aware of the analyzability of this type of words. Finally, the fact that the students failed to find out the meanings of these test words (along with the similar results of the pilot test) lent more credit to the utilization of the same test words in the posttest in order to show the progress (or lack of it) that these students made.

The markedly higher posttest results (mean score = 73.70), on the other hand, indicated that these students' ability to guess the meanings of this type of words had improved considerably, almost four times as much. Moreover, as students managed to guess the meanings of 73.7% of these test words, it may be concluded that these students have become capable of deducing the meaning of (i.e., they have increased their receptive vocabulary by) 73.7% of all the English words containing any of these twenty-eight roots.

Comparing the mean scores of both tests using a correlated-samples t-test revealed that the students' mean score on the posttest was significantly higher than their mean score on the pretest (t = 38.6 p<.005). Differences that are significant at the .005 level may be regarded as "very significant" (Edwards, 1950:28), "highly significant" (Robson, 1973:35), or even "very highly significant" (Butler, 1985:71). Thus, the instructional course the students took could be said to have significantly improved their performance in the posttest. This answers question (2) stated above. The second level on which the results of the two tests were statistically analyzed was in terms of the test items!

As for items' difficulty level, the FVs of the twenty-eight items in both tests were computed. Their values were classified into FVs of items containing Greek roots and items containing Latin roots. As far as the pretest results are concerned, the extent to which the mean FV of the first group was larger than that of the second (more than twice as much) revealed that these students, before taking the course, did not only find Greek roots easier to identity than Latin roots (as shown in Part I) but also found it easier to guess the meanings of test-words containing Greek roots than of those containing Latin roots.

As for the posttest results (i.e., after being made aware of the analyzability of these words and being trained in deducing their meanings), students still found the meanings of words containing Greek roots easier to deduce than those of words containing Latin roots. However, the difference between the FVs of the two groups was smaller than that of the pretest results.

These results, which correspond with Monson's (1968, p. 35) claim that words containing Greek roots are easier to learn than words from Latin, may be attributed to two factors: first, the fact that Greek roots were borrowed more recently than Latin roots; and second, the fact that the use of Greek roots was to a large extent restricted to the vocabulary of science. Due to these two factors, Greek roots underwent far fewer linguistic changes, whether in form or meaning, than Latin roots. Moreover, since most of these Greek words were coined to designate specific scientific concepts, they maintained a close relationship between their overall meaning and that of their constituent parts.

Finally, to answer the fourth and last question that was raised at the beginning of this study, four more test words were added to those of the pretest and the

posttest. These words were English words containing Greek and Latin roots whose meanings were not taught to these students.

The students' responses to these four items in the pretest (mean score = 24.2%) revealed that most of these students could not guess the meanings of these words. The students' scores on the posttest (mean score = 46%), on the other hand, showed that their ability to guess the meanings of these test words had increased, becoming almost twice higher, though none of the roots of these test words was taught in the intervening instructional course. This means that these students were able to transfer the training they received in analyzing words whose roots were systematically taught to them to other words whose component roots were supposedly unknown to them. The large extent to which students' ability to guess the meanings of these words has improved also implies that, even before taking the course, these students had at least a general idea, no matter how vague, about the meanings of the four roots *-logue, -viv-, -phon-* and *mort-*, and that all that the course did, in this particular situation, was to teach them how to employ that knowledge to get the meanings of the test-words.

This transfer of training, as measured by the relevant formula, was found to be 89.6%. That is, these students managed to improve their ability to guess the meanings of these four test words by 89.6%. This large amount of transfer may be attributed to the total similarity of the stimuli eliciting the responses in Task A and Task B, to use Irion's (1971, p. 257) terms. In other words, in both the instructional course and the posttest, students were presented with the same stimuli: English words containing classical roots.

Conclusions

The major findings of the current study were the following:

1. Advanced Iraqi EFL learners are unaware of the analyzability of English words containing Greek and Latin roots. Moreover, these learners' command of this type of vocabulary items is markedly poor.

2. When made aware of the analyzability of these words, these learners will be able to increase their vocabulary considerably. This is because, unlike other methods of learning vocabulary, making students aware of the analyzability of words enables them to learn not only the example words they are systematically taught but also many other English words containing the roots of these example words. Moreover, this awareness will also improve the students' ability to guess the meanings of words containing roots other than those they were taught.

3. Students find guessing the meanings of words containing Greek roots easier than those of words containing Latin roots.

Implications

Based on the conclusions arrived at, the researcher would like to outline the following pedagogical implications:

1. Textbook writers and teachers of vocabulary at the advanced level should pay more attention to teaching English words that contain Greek and Latin roots since these constitute more than two-thirds of all the words in English.

2. More attention should also be paid to the use of indirect means of vocabulary expansion since these would help advanced learners deal with the kind of English used by native speakers and help them become more independent and responsible for their own learning.

References

Ayers, D. (1986). *English words from Latin and Greek Elements. 2nd ed.* The University of Arizona Press.

Bauer, L. (1983). *English word-formation.* Cambridge university press. https://doi.org/10.1017/CBO9781139165846.

Carter, R. a. (1988). *Vocabulary and Language Teaching.* Allen and Unwin.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage publications.

Davis, N. B. (1979). *Vocabulary improvement: A program for self-instruction.* McGraw-Hill College.

Deighton, L. (1971). Vocabulary Development. In L. e. Deighton, *Encyclopedia of Education.* Macmillan.

Deighton, L. C. (1959). *Vocabulary development in the classroom.* Bureau of Publications, Teachers College, Columbia University.

Dictionary, O. E. (2003). *Oxford English Dictionary.* Oxford University Press.

Friend, C., Knight, L. D., & Glazier, T. F. (2014). *The least you should know about vocabulary building: word roots.* Cengage Learning.

Gairns, R., & Redman, S. (1986). *Working with words: A guide to teaching and learning vocabulary (pp. 74-80).* Cambridge: Cambridge University Press.

Gronlund, N. E. (1977). *Constructing achievement tests.* Prentice-Hall.

Honeyfield, J. (1977). Word frequency and the importance of context in vocabulary learning. *RELC Journal, 8*(2), 35-42. https://doi.org/10.1177/003368827700800202.

Irion, A. (1971). Transfer of Training. In L. Deighton, *Encyclopedia of Education.* Macmillan.

Jennings, C., King, N., & Stevenson, M. (1980). *Consider your words, 3rd ed.* Harper & Row Publishers.

Kent, R. (1963). *Language and Philology.* Cooper Square Publishers, Inc.

Kruse, A. F. (1979). Vocabulary in Context. *English Language Teaching Journal, 33*(3), 207-13. https://doi.org/10.1093/elt/XXXIII.3.207.

Levine, H., & Levine, R. (1980). *Vocabulary resources for the college student.* New York: Amsco. Amsco.

Luschnig, C.A.E., & Luschnig, L.J. (1982). *ETYMA: Introduction to Vocabulary Building from Latin and Greek.* Rowman & Littlefield.

Monson, S. C. (1968.). *Word Building.,* 2nd Ed. The MacMillan Company.

Morris, I. (1945). *The Teaching of English as a Second Language.* Macmillan.

Nation, I. (2005). Teaching and learning vocabulary. In E. Hinkel (ed.), *Handbook of Research in Second Language Teaching and Learning* (pp. 581-595). Lawrence Erlbaum.

Nissan, S., & Schedl, M. (2012). Prototyping new item types. In G. Fulcher & F. Davidson (Eds.), *The Routledge handbook of language testing* (pp. 281-294). New York, NY: Routledge.

Nist, J. (1966). *A Structural History of English.* St. Martine Press.

Palmberg, R. (1989). What makes a word English? Swedish speaking learners' feeling of "Englishness. *AILA Review, 6*, 47-55.

Roberts, P. (1968). *Modern grammar.* Harcourt Brace College Publishers.

Stageberg, N. C. (1971). *An introductory English grammar.* Holt, Rinehart and Winston.

Twaddell, F. (1973). Vocabulary expansion in the TESOL classroom. *TESOL Quarterly*, 61-78. https://doi.org/10.2307/3585510.

Vallette, R. (1977). *Modern Language Testing, 2nd ed.* Harcourt Brace Jovanovich, Inc.

Wallace, M. J. (1982). *Teaching vocabulary (Vol. 10).* Heinemann.

Webster, N. (1981). *Webster's third new international dictionary of the English language, unabridged.* Merriam-Webster.