

The Effect of Concordancing based Teaching on Student's Vocabulary Retention

Nika Golabi^{1*}

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Abstract

Vocabulary learning is at the heart of language learning and language use. It is what makes the essence of a language. Having it in mind, most of the students always complain about lexical problems, and unfortunately, they are unaware of the different tools, which can help the students to learn vocabulary and improve vocabulary retention. A useful tool for learning and teaching vocabulary is a tool that uses authentic samples to enhance comprehension. Concordancing software is one of these digital tools that enable learners to explore billions of real-world materials. In this regard, the present study was conducted to investigate the actual effect of using this software on vocabulary retention. To gain this purpose, a sample of 54 intermediate female EFL students took part in this study. Participants were randomly assigned to two equal experimental and control groups. Before starting the treatment, the researcher gave the pretest to both groups. Then the treatment sessions were started for both groups, which lasted 12 sessions (4weeks); ten vocabularies were taught in each session and during this time the vocabulary of each lesson was taught by using concordancing software to the experimental group and by using a list of vocabulary to the control group. After the treatment sessions, the posttest was administered to both groups. The results of this comparison proved that the use of concordancing software improved learners' vocabulary knowledge. The outcomes have the potential to affect language learners' performance and teachers' beliefs about the effectiveness of using CALL programs, especially concordancing programs.

Keywords: CALL; DDL; Corpus Linguistics; Concordancing; Vocabulary

1. Introduction

All participants in the language learning process (educators, language learners, and scholars) acknowledge that learning vocabulary is a fundamental aspect of understanding a second language (Schmitt, 2010). It appears that a considerable amount of vocabulary combined with minimal grammar can help learners improve their communication, comprehension, and their understanding. This amount of vocabulary acts as a vehicle for the

¹ Department of English Language Teaching, Faculty of Humanities, Mohaghegh Ardabili University, Ardabil, Iran, Email: nikagolabi@gmail.com

practice of structural patterns for conveying realistic messages when the learner finds himself. According to different studies, there is a significant correlation between vocabulary knowledge and language skills, and a lack of vocabulary will have an impact on our performance (Lee, Warschauer, & Lee, 2017; Yılmaz & Soruç, 2015). As a result, instructors always aim to improve vocabulary learning by providing a large amount of input, and students try to learn a massive range of words to boost their understanding and achievements. Currently, educators have attempted to use authentic materials to optimize communicative skills. The crucial point is that learning vocabulary should seldom be considered as a separate activity unless it is acquired for a specific purpose at a higher level. Even yet, if vocabulary has been applied in a meaningful activity or task, it will be more easily available for retrieval. Further, different investigations have yielded the conclusion that diverse Computer Assisted Language Learning (CALL) and Mobile Assisted Language Learning (MALL) programs are more effective in teaching vocabulary items than a still picture in the textbooks for learners, especially EFL learners (Daskalovska, 2015; Lee et al., 2017; Yılmaz & Soruç, 2015). According to Gabel (2001), concordancer is a text analysis tool that can produce electronically large collections of authentic written and spoken language. Despite theorists' acknowledgment of concordancers' remarkable role in increasing students' vocabulary size and knowledge, many instructors persist to use traditional methods for teaching vocabulary. One justification for this issue could be the limited body of research that reveals the actual use of concordancer, particularly on vocabulary learning in classroom settings, which uncover the positive and negative points about this software. The purpose of this study was to investigate the role of concordance in helping to improve vocabulary learning among Iranian English language learners. The current study findings are significant since they have implications for instructional design, language teaching, and language learning. The outcomes have the potential to affect language learners' performance and beliefs. To achieve the purpose of the study, the following research question is proposed:

RQ1. What are the effects of concordancing based teaching on the EFL student's vocabulary retention?

2. Review of Literature

A crucial fact is that educators' attitudes toward teaching vocabulary have changed over the decades, and they now use completely different and effective methods to teach vocabulary. If we want to take a brief historical look at recent approaches to teaching and learning vocabulary, we should start with the GTM (Grammar Translation Method) method, which centered on grammar and gave secondary attention to vocabulary, and learners learned vocabulary out of context (Williams, 2001). Following the Reform Movement, new approaches such as the Direct Method, Reading Method, and Audiolingual Method emerged. Instead of teaching how to memorize synonyms, antonyms, and write summaries, teachers and scholars focused on interaction, communication, the usefulness of vocabularies, and attempting to pay attention to their everyday use (Schmitt, 2010). Since the emergence of CLT (Communicative Language Teaching), there has been a greater emphasis on authentic written and spoken materials and language use rather than language usage. The important fact to note here is that language

learners' responsibilities in language learning gradually became more colorful over time, and language learners became a significant part of the learning process. As one of the most fundamental components of language learning, students needed to communicate using what they were learning, so the demand for authentic content grew day by day. As a result, attention to authentic materials has grown throughout time, and one of the most essential aims of teachers and learning materials developers currently is to link students to authentic context. Corpus linguistics is one of the domains that have a special focus on authentic language. According to McEnery and Wilson, (2001), one of the best definitions for corpus linguistics is "the study of language based on examples of "real life" language use" (p. 1).

In different academic disciplines, the concept corpus has slightly diverse meanings. In most cases, it refers to a body of texts. In corpus linguistics, the concept refers to a collection of instances of language use (Stefanowitsch, 2020). A corpus must be large enough to contain a representative sample of the phenomena under study, as well as extensive instances of each grammatical structure, language variety, and vocabulary item (McEnery & Hardie, 2011; Paquot & Th, 2020; Szudarski, 2017; Stefanowitsch, 2020). As Dash (2008) noted, the development of electronic or digital language corpora has given linguistics a fresh lease on life. Technology has enabled us to create electronic language corpora for use in different fields of language study and development. It has made significant contributions to linguistics by providing new methods and software for gathering evidence of real language usage and analyzing it from new angles. According to O'Keeffe et al. (2007), concordancing is a fundamental tool in corpus linguistics, and it entails utilizing corpus software to discover every instance of a specific word or phrase. Concordancing can therefore provide a data-driven learning opportunity to teach and learn language according to prior studies. The term Data-driven learning (DDL) refers to learners seeking to learn like a detective, and the instructor supporting them in this discovery (Johns, 2002; Yılmaz & Soruç, 2015). Extensive studies on the efficiency of corpus-based language education in vocabulary learning and Data-driven learning have been conducted in the last couple of decades (Cobb, 1999; Daskalovska, 2015; Li, 2017; Varley, 2009; Çalışkan & Gönen, 2018). For instance, as Frankenberg-garcia (2012) argued concordance can enable students in understanding new terms just as much as dictionary definitions did, and it has also proven to be beneficial in assisting them in correcting the usage of words that they understood but commonly misused. However, there are limited studies exploring teachers' practices in the actual classroom regarding the use of corpus-based materials and their insights of this approach (Çalışkan & Gönen, 2018).

As Wilkins (1972) argued, vocabulary has long been viewed as one of the most vital components of language learning since it is almost impossible to convey meaning without this important piece of language. However, most of the students in Iran are faced with the problem of lack of lexical storage. Nonetheless, many learners, as well as teachers, have always shown a great interest in finding out how words can best be learned (Cobb, 1999; Swales, 2006). Previous studies have found that, due to the rapid expansion of CALL, implementing concordancing may assist learners to achieve this goal and understand not only vocabulary but also grammar, spelling, writing, pronunciation, and many more (Yılmaz & Soruç, 2015). The present study intends to explore these effects on Iranian EFL students' vocabulary learning.

3. Method

The design of this study was a pretest-posttest randomized experimental design. The pretest was administered before any kind of instruction or treatment and the posttest after the treatment finished.

3.1. Participants and Setting

A sample of 54 female EFL students took part in this study. The participants were female intermediate students who were studying in the tenth grade of Shahid Salehi high school in Tehran and they were randomly selected. The mean age of the students was about 18 from 17 to 19. All the participants' dominant language was Persian, and they all studied English as a foreign language in high school and they did not have any extra English classes.

3.2. Instrumentation

Concordancing software, iweb corpus (The iWeb Corpus (English-corpora.org)) was used as the main software. In each session, 10 words were taught and the experimental group used iweb to learn the meaning, spelling, word formation, usage, and the picture of each word, which was provided on the software printed and attached to the portfolios of students.

3.3. Procedures

To accomplish the purpose of the study the following procedures were followed. To assess the homogeneity of the participants of this study the Nelson Test was administered to 60 female Iranian EFL students in a tenth-grade high school in Tehran. The test was conducted to estimate the participants' general knowledge of English and to determine a sample of more frequent variances. Those who scored between +1 and -1 standard deviation above and below the mean were selected. Therefore, the participants were reduced to 54 students and they were randomly assigned to two equal experimental and control groups. Before starting the treatment, the researcher gave the pretest to both groups to check their vocabulary knowledge. The vocabulary test was prepared based on 120 words, which were taught to both groups. Item facility, item discrimination, and choice distribution of the final draft of the test, as well as reliability, were calculated. As table 1 shows, the difference between the two means was not significant. The two means obtained from the pretest were compared through t-test and the participants were almost homogenous before the treatment. Afterward, for both groups, 12 sessions (4 weeks) of treatment were held that continued and through this period the vocabulary of each lesson was taught by using concordancing software to the experimental group. In each session, ten vocabularies were taught.

The researcher began by writing the vocabularies on the smartboard and then explaining how to use the concordancing program. The students were then divided into four groups, each group with one computer equipped with Wi-Fi. Each member of each group typed two words and provided a meaning, synonym, antonym, image, pronunciation, and four authentic sentences. Following that, students discussed their findings in teams and developed a report for those ten vocabularies. Finally, the researcher evaluated their document and offered feedback. The same words were taught to the control group but in the traditional way of teaching (i.e.,

memorization, providing word list) the vocabulary items in their English classes at high school. After the treatment sessions, the posttest was administered to both groups. The data were gathered from the posttest and were analyzed.

4. Results and Discussion

4.1. Pretest Results

The pretest was given to both groups to check their vocabulary knowledge. Since these two groups were assigned randomly, the mean performance of the two groups in the vocabulary test was calculated to see if it was significant or not. Table (1) represents the descriptive statistics for the pretest.

Table 1.
Descriptive Statistics for Pretest.

Groups	Experimental	Control
Number	27	27
Mean	13.15	13.17
Variance	2.07	2.09
Standard deviation	1.43	1.44
SEM	0.61	0.61

As the table1 shows, the difference between these two means was not significant. The two means obtained from the pretest were compared through an independent t-test and as table 2 shows, the participants were almost homogenous before the treatment.

Table 2.
Independent t-test.

	t.observed	t.critical	d.f
Pretest	-0.04	2.02	52

By looking at the table2, one can find that the t-observed value, -0.04 at 52 degrees of freedom is lower than the t-critical value, 2.02 at 0.05 level of significance. Hence, it could be declared that both groups, the control, and experimental groups, were nearly homogenous in terms of vocabulary knowledge.

4.2. Posttest Results

At the end of treatment sessions, the posttest was administered to both groups. Based on the scores of students, the mean score of each group was calculated. Table 3 shows the results of the posttest.

Table 3.
Descriptive Statistics for posttest.

Groups	Experimental	Control
Number	27	27
Mean	15.32	11.7
Variance	3.44	3.54
Standard deviation	1.85	1.88
SEM	0.79	0.80

As the table 3 shows, the difference between these two means of performance was large enough to show that the difference is related to the treatment. It means that using concordancing can affect students' vocabulary learning. However, the more statistical computation was done to show whether the difference between these two mean scores was statistically significant (Table 4).

Table 4.
Independent t-test.

	t.observed	t.critical	d.f
Posttest	4.7	2.00	52

As presented in table 4, the t. observed which is calculated to compare the mean scores of the two groups on the posttest is 4.7. This amount of t at 52 degrees of freedom is much greater than the t. critical value, 2.00 at 0.05 level of significance. Therefore, the difference between these two means of performance is large enough to show that there is a significant difference between the vocabulary retention of the students who received instruction by applying concordancing software and those who did not receive it.

In general, the findings of this research show that concordancing has positive effects on the experimental group and they had better performance than the control group in the posttest. One of the reasons for this difference can be the novelty and attractiveness of this technological tool for the students. The results of this study revealed that the student's degree of learning increases when they learn the new words by using concordancing program. Of course, the traditional way of teaching and learning like memorization is widely used in Iran and all the participants were familiar with this method but it did not improve the performance of the students who learned the new items by this strategy. Therefore, teachers must change some of their old teaching strategies to encourage language learners in the process of learning. This finding adds to and confirms the literature which indicates that CALL and Data-driven learning may assist learners to recall vocabulary since concordancing software supplies numerous instances, learners may absorb authentic language that is absent in traditional language learning methods. An interesting note is that the use of concordancing software is beneficial to not only teachers and students, but linguists, as it empowers them to reach a conclusive viewpoint on any aspect of a language in an inductive fashion based on the analysis of numerous examples (Daskalovska, 2015). A further key aspect of implementing concordancing program is that students loved the process and mastered concepts in a game-like manner and tried to discover new items, which is consistent with the findings of other studies (Boulton, 2012; Chang & Sun, 2009; Kheirzadeh & Marandi, 2014; Yilmaz & Soruç, 2015).

5. Conclusion

The current study revealed that the student's degree of learning increases when they learn the new words by concordancing program. Of course, the traditional methods of teaching and learning vocabularies are widely used in Iran and all the participants were therefore familiar with traditional strategies such as memorizing, but it did not improve the performance of the control group in this study. Therefore, teachers must modify some of their teaching approaches and methods to enhance learning.

The primary limitation of the present study is the small number of participants. Furthermore, only female students participated in this research project, thus the results may not be broadly applicable to both genders.

Further research might consider the constraints and conduct a study with both genders as well as students of different ages to discover whether the same findings are obtained. Likewise, further study might delve into how concordancing programs affect other language skills and subskills like writing and grammar.

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