

## The Effectiveness of Using Corpus-Based Activities on the Learning of Some Phrasal-Prepositional Verbs

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### ABSTRACT

This empirical study investigates the effectiveness of using corpus-based activities on 70 Turkish upper-intermediate level teacher candidates' learning of 40 phrasal-prepositional verbs, verb + particle + preposition combinations. The purpose of the study is to determine whether six-hour instruction via corpus-based activities is effective with (a) helping the students recognize and understand the form of the verbs, (b) helping the students understand the metaphorical meanings of these structures, and (c) helping the students construct the correct forms of the verbs in order to use them while paraphrasing sentences. Three tests were administered to the students, and the results revealed that the students were able to recognize and understand the form of those verbs and construct the correct forms of them in order to use them while paraphrasing sentences after six-hour teaching via corpus-based activities. However, it was found that six-hour instruction via corpus-based activities was not effective with helping the students understand the metaphorical meanings of those structures.

**KEYWORDS:** Corpus-based activities, phrasal-prepositional verbs, corpora, language teaching

### INTRODUCTION

It is highly acknowledged that second language teachers face great challenge while teaching phrasal-prepositional verbs, verb + particle + preposition combinations, to language learners (Dagut & Laufer, 1985). Although there are many materials (e.g., textbooks, course books, specialized learner dictionaries of multi-word verbs) to help students learn these verbs, it is suggested that these materials present the structures in a way that students have to learn them by memorizing, thereby implying that there is no system to learn them easily and effectively (Ganji, 2011). More precisely, it is hypothesized that students fail to recognize and understand the form of these structures, because there are so many of them and the combination of verb, adverb, and particle seem so random (Ganji, 2011). In terms of meaning, it is hypothesized that even if language teachers help students learn the structure of phrasal-prepositional verbs effectively by using different methodologies and materials, helping them to go beyond the literal meaning constitutes a real challenge for language teachers (Side, 1990). Lastly, in terms of use, it is hypothesized that students struggle with deciding when and how to use one form of a verb instead of another and when the particles of the structures should be separated from its verb (i.e., principle of dominance) (Erteschik-Shir & Lappin, 1979).

This empirical research aims to examine whether using different materials (i.e., corpus-based activities) is effective with teaching 70 Turkish upper-intermediate proficiency level teacher candidates 40 high level phrasal-prepositional verbs in terms of three dimensions (i.e., form, meaning, and use) of phrasal verb knowledge after six hour instruction. The research also aims to reveal any learning difference among the students' knowledge of these three dimensions of phrasal-prepositional verbs.

The current research is a quantitative one that includes the analysis of the tests on the students' recognition of the form of the phrasal-prepositional verbs, understanding of the metaphorical meanings of the verbs, and their ability to construct the correct forms of the verbs in order to use them in sentence writing. It should be noted that the use dimension in the current study is presented in a different sense, which is defined as the construction of the correct forms of the verbs in sentence writing. Therefore, the current research hypothesizes that by using corpus-based activities, a) the students will be able to recognize and understand the form of the phrasal-prepositional verbs, b) the students will be able to understand the metaphorical meanings of these structures, and lastly c) the students will be able to construct the correct forms of these structures in order to use them while paraphrasing sentences. Data obtained from the tests were compared through One-way ANOVA and the means were presented to reveal any significant difference. In the conclusion part, suggestions were given for language teachers who are having difficulty in the teaching of verb + particle + preposition combinations to students.

### LITERATURE REVIEW

The use of corpora in language classes has been widely acknowledged as a valuable resource by many researchers (e.g., Biber & Reppen, 2002; Chambers, 2007; Hill, 2000; Hunston, 2002). Over the years, several

studies have emerged in the field to investigate the effectiveness of the use of corpora in language teaching (e.g., Ashkan & Seyyedrezaei, 2016; Barabadi & Khajavi, 2017; Chan & Liou, 2005; Chao, 2010; Chujo, Utiyama & Miura, 2006; Gaskel & Cobb, 2004; Koosha & Jafarpour, 2006; Paker & Ergül-Özcan, 2017; Sun & Wang, 2003; Tekin & Soruç, 2016; Uçar & Yükselir, 2015; Vannestal & Lindquist, 2007; Yılmaz & Soruç, 2015). The majority of these studies have attempted to determine the effectiveness of the use of corpora on learners' learning of vocabulary in English (e.g., Ashkan & Seyyedrezaei, 2016; Barabadi & Khajavi, 2017; Chan & Liou, 2005; Chao, 2010; Koosha & Jafarpour, 2006; Paker & Ergül-Özcan, 2017; Sun & Wang, 2003; Tekin & Soruç, 2016; Uçar & Yükselir, 2015; Yılmaz & Soruç, 2015).

Paker and Ergül-Özcan (2017), for example, investigated the effectiveness of corpus-based vocabulary teaching activities on 28 intermediate level students' English vocabulary learning. The participants in the experimental group were taught through corpus-based vocabulary teaching activities, whereas the participants in the control group were taught vocabulary activities through the tasks in their text book and dictionary. The researchers found that using corpus-based vocabulary tasks were more effective than the tasks in the textbook. Similarly, Ashkan and Seyyedrezaei (2016) examined the effect of corpus-based teaching on EFL learners' vocabulary learning. The results of the study indicated a significant difference between the experimental and control group in favor of corpus-based vocabulary teaching.

Sun and Wang (2003) investigated the effectiveness of inductive and deductive teaching on 81 senior high school students' learning collocations by using a concordancer. The study concluded that using the concordancer was beneficial for the learners, as it helped them develop their own effective learning strategies for language learning. Chan and Liou (2005) also investigated the effectiveness of using a web-based Chinese-English bilingual concordancer on the learners' learning of English verb-noun collocations. The researchers found that the learners improved their collocations significantly after the treatment.

Koosha and Jafarpour (2006) investigated the role of the DDL (Data-Driven Learning) in the teaching of the collocations of English prepositions to adult learners. The researchers divided the learners into two groups. While one group received the data-driven instruction, the other group received conventional instruction. The researchers found that the learners receiving data-driven instruction outperformed those who received conventional instruction in the learning of the collocations of prepositions.

Uçar and Yükselir (2015) also examined whether corpus-based activities had an effect on the teaching of some adjective-noun collocations to language learners in an EFL context. The researchers found that the students receiving instruction through corpus-based activities outperformed those who received instruction in the traditional method on the collocation recognition test.

In the light of these effects, it can be claimed that an investigation of the effectiveness of using corpora on the learners' learning of English phrasal-prepositional verbs has not been given special attention in research literature. Rather, the majority of the studies have mostly centered upon the learners' learning of English collocations, and one central finding coming from the studies is that using corpora is quite effective with teaching collocations to language learners. Therefore, the current study seeks to investigate whether the use of corpora is also effective with teaching language learners English phrasal-prepositional verbs.

## **METHODOLOGY**

This section firstly introduces the research questions and participants of the current study. Additionally, instruments and materials used in the study are presented in turn. Lastly, data collection and data analysis procedures are summarized briefly.

### **Research questions**

The current study seeks to answer three research questions as proposed below:

1. Is six-hour instruction via corpus-based activities effective with teaching the students the form of the phrasal-prepositional verbs?
2. Is six-hour instruction via corpus-based activities effective with teaching the students the metaphorical meanings of the phrasal-prepositional verbs?
3. Is six-hour instruction via corpus-based activities effective with teaching the students how to construct the correct forms of the phrasal-prepositional verbs in order to use them while paraphrasing sentences?

### **Setting and participants**

The study was conducted at a state university, in the Department of English Language Teaching (ELT), in the Faculty of Education. Two intact classes, which included 70 Turkish students of English language education in total, took part in the study. The students' proficiency level was upper-intermediate. They were in their first year and were taking the Contextual Grammar I course. Each intact class consisted of 35 students. The students were in the age range of 18 to 21. Forty-eight of the students were female and 22 of them were male.

### **Instruments and materials**

Three tests (i.e., form recognition test, multiple-choice meaning test, and sentence-rewrite use test) were used in the current study, and the materials were a corpus and corpus-based activities.

### **Tests**

The tests prepared for the study were form recognition test, multiple-choice meaning test, and sentence-rewrite use test. To ensure that the study included the parallel versions of the tests, a question pool of the test items were made. Approximately 150 questions in total were written for the question pool, and the questions were prepared from the sentences which were taken from the Corpus of Contemporary American English (COCA). To ensure that the questions were all at the same level of difficulty, some experienced teachers were consulted. After receiving feedback from the teachers about the questions and making the necessary changes, the tests were constructed. The form recognition test included 20 extracts which were taken from the corpus and each of which included only one phrasal-prepositional verb. The students were required to identify the phrasal-prepositional verb in each extract. The multiple-choice meaning test consisted of 20 sentences which were also taken from the corpus. The students were required to choose the best phrasal-prepositional verb, a, b, c, d, or e to complete the sentences. Lastly, the sentence-rewrite use test consisted of 20 sentences which were also taken from the corpus. The students were required to write a new sentence with the same meaning, using the correct form of a phrasal-prepositional verb from the list. Therefore, each test consisted of 20 questions, so the pre-test consisted of 60 questions in total and the post-test consisted of 60 questions in total. The tests can be seen in Appendix A.

The tests were scored by three people, including the researcher. For two tests (i.e., form recognition test and multiple-choice meaning test), the scoring was based on a 0-1 point scale. More precisely, the students received 0 point when they provided an incorrect response, or when they did not provide a response at all, and they received 1 point when they provided a complete correct response. For the sentence-rewrite use test, the scoring was based on some partial points. That is, if the errors in the paraphrased sentences did not make a substantial change in the meaning of the sentences and the students managed to construct the correct forms of the verbs to use them while re-writing appropriate sentences, the sentences were given some partial points (i.e., 0, .5, and 1). To ensure that the reliability of the scoring was sufficient, 10% of the test papers were randomly selected and scored by a different person, and it was found that the interrater reliability was 91%.

### **The corpus and corpus-based activities**

In this empirical study, the corpus of contemporary American English (COCA) (Davies, n.d.) was used as a resource while preparing both the tests questions and the activities (i.e., corpus-based activities). For practice activities, appropriate concordance lines which were taken from the corpus for the targeted phrasal-prepositional verbs were prepared with an aim to help the students see the usage of the phrasal-prepositional verbs in their real contexts so that they can understand the form of the verbs, discover the meaning of them, and use the correct form of them while re-writing sentences. Therefore, firstly, the concordance lines, which include the usage of the targeted phrasal-prepositional verbs, were prepared, and they were taken to the classes and used for presentation, discovery, and practice purposes. A screen shot of some of the concordance lines can be seen in Appendix B.

After getting the concordance lines for the phrasal-prepositional verbs from the corpus, the corpus-based activities were prepared. The activities consisted of four sets of papers each of which included 20 concordance lines in which 10 phrasal-prepositional verbs were seen in their real usages and five tasks that included form, meaning, and use activities of the phrasal-prepositional verbs. A sample of the activities prepared for the phrasal-prepositional verbs can be seen in Appendix C.

### **Data collection procedure**

The focus of the current study was 40 high level phrasal-prepositional verbs which were selected from Longman Dictionary of Phrasal Verbs and instructed via corpus-based activities for six hours. In Table 1, the target 40 phrasal-prepositional verbs of the study are presented.

After selecting the phrasal-prepositional verbs from the dictionary and preparing the tests and the corpus-based activities, the study was initiated with the pre-testing session in the two intact classes. The students were firstly

tested on their recognition of the form of the phrasal-prepositional verbs, then on their understanding of the metaphorical meanings of the verbs, and lastly on their ability to construct the correct forms of the verbs in order to use them in sentence writing. Approximately 15 minutes for each test was given; hence, both the pre-testing and the post-testing sessions lasted 45 minutes.

**Table 1:** The target phrasal-prepositional verbs

To walk out on	To start in on	To eat away at	To chip away at	To knock up against
To get round to	To fly off with	To creep up on	To get back at	To cut ahead of
To bring up against	To burst in on	To clean up on	To cry out against	To hold on to
To face up to	To go back on	To talk back to	To dine out on	To clamp down on
To stand in for	To brush up against	To look down on	To check up on	To feel up to
To do away with	To hammer away at	To wake up to	To come in on	To boil down to
To shy away from	To hang around with	To go through with	To fall back on	To put in for
To drop out of	To look out for	To fit in with	To add up to	To bubble over with

Approximately one week later than the pre-testing session, the instruction was started, which lasted two days and six hours for each class. During the six hour treatment, the students were given four sets of corpus-based activities each of which consisted of 20 concordance lines that included 10 high level phrasal-prepositional verbs and five tasks that included form, meaning, and use activities of the phrasal-prepositional verbs. For form recognition activity in Tasks A and B (see the tasks in Appendix C), the students were required to discover the form of the verbs on their own. As such, an implicit teaching was used for the analysis of the verbs in the concordance lines. However, since the participants in the current study did not know what a corpus is and what a concordance line is like, one example analysis was presented to them so that they could understand the specific features of the verbs (i.e., verb + adverb particle + preposition + noun phrase). In Task C (see the task in Appendix C), the students were required to discover the meanings of the verbs by analyzing the concordance lines on their own. As such, an implicit teaching was used again while practicing the meaning of the verbs in Task C. However, an explicit teaching was used while practicing the meaning and the usage of the verbs with 10 meaning-based multiple-choice questions in Task D (see the task in Appendix C) as well as 10 usage-based sentence-rewrite questions in Task E (see the task in Appendix C). Therefore, it can be claimed that the study adopted a combination of explicit and implicit instruction.

Approximately 14 days later than the instruction and 21 days later than the pre-testing session, the students were again tested on their recognition of the form of the phrasal-prepositional verbs, then on their understanding of the meanings of the verbs, and lastly on their ability to construct the correct forms of the verbs in order to use them in sentence writing.

### Data analysis

In order to investigate the effectiveness of the corpus-based activities on the students' performance on the tests, the quantitative analysis of the test scores of the students was used to compare the students' initial performance with their final performance on the tests. The pre-test scores of the two intact classes were firstly compared to see whether the groups were homogenous in terms of their knowledge of the target phrasal-prepositional verbs, and then the pre-test scores and the post-test scores of the students were compared in order to see whether the students in both classes demonstrated learning for three dimensions (i.e., form, meaning, and use) of phrasal verb knowledge. Lastly, a learning gain score for each individual student was calculated by subtracting the pre-test scores from the post-test scores.

### RESULTS

Out of 70 students, three students did not participate in any of the two testing sessions in total. Additionally, nine students' test papers were eliminated from the study, because three of them only participated in the pre-testing session, two of them only participated in the post-testing session, and four of them were not present at the time of the instruction. Therefore, while conducting the data analysis for the study, only the results of 58 students were taken into consideration.

### Comparison of the pre-tests scores

The data were initially analyzed to see whether the pre-test scores of the two intact classes were equivalent in terms of three dimensions (i.e., form, meaning, and use) of phrasal verb knowledge. That is to say, the data were initially analyzed to determine whether the two classes were homogenous in terms of their knowledge of the phrasal-prepositional verbs before the instruction started.

**Table 2:** Pre-test means, two classes

	Class 1 (N=32)		Class 2 (N=26)		Independent Sample T-Test Results
	Mean	Std. Dev.	Mean	Std. Dev.	
Form (max. score 20)	13.81	6.85	15.53	4.78	P(two-tailed)=.282
Meaning (max. score 20)	6.62	3.24	5.46	2.30	P(two-tailed)=.129
Use (max. score 20)	1.12	1.49	1.69	1.31	P(two-tailed)=.136

The means presented in Table 2 appear to show that there were some differences between the classes in terms of their pre-test scores for form, meaning, and use. The mean scores of the classes for the pre-tests were compared using Independent Sample T-Test, and the test showed that there were no significant differences between the classes in terms of their pre-test scores for any dimension ( $p$  (two-tailed)  $>.05$ ). From these results, it can be claimed that the two classes were equivalent in terms of their knowledge of the target structures at the beginning of the teaching.

### Comparison of the pre-tests and post-tests scores

The pre-test scores and the post-test scores of the students were compared in order to see whether the students in both classes demonstrated learning for the dimensions. In Table 3, the means and standard deviations of the pre-test scores and the post-test scores of the students are presented.

**Table 3:** Pre-tests and post-tests means

	Pre-test				Post-test				One-way ANOVA results
	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	
Form (max. score 20)	0	20	14.58	6.02	4	20	17.43	3.16	P(two-tailed)=.021
Meaning(max. score 20)	1	13	6.10	2.89	1	15	9.79	3.05	P(two-tailed)=.267
Use (max. score 20)	0	7	1.37	1.43	0	16	6.94	4.34	P(two-tailed)=.041

The means presented in Table 3 appear to show that the students demonstrated learning for all dimensions. The means of the pre-test scores and the post-test scores were compared using One-way ANOVA test, and the test showed that there were significant differences between the students' pre-test scores and post-test scores for two dimensions (i.e., form and use). However, for meaning dimension, there was no significant difference between the students' pre-test scores and post-test scores. Therefore, it can be claimed that using corpus-based activities is not effective with teaching English phrasal-prepositional verbs in terms of meaning.

### Comparison of gain scores

In order to see how much was learned from the pre-assessment to post-assessment, a learning gain score for each individual student was calculated by subtracting the pre-test scores from the post-test scores. Firstly, the number of the students was calculated in order to determine the number of the students who gained and did not gain. In Table 4, the number of the students who gained and did not gain from the pre-assessment to post-assessment can be seen.

**Table 4:** Student numbers, gains vs. no gains

	Gains	No gains
Form	34	24
Meaning	45	13
Use	52	6

The numbers presented in Table 4 appear to show that the number of the students who gained was higher for meaning and use dimensions, and the number of the students who did not gain was higher only for form dimension. It can be claimed that even if the number of the students was higher for meaning dimension, the students could not demonstrate significance learning by using corpus-based activities.

## DISCUSSION AND CONCLUSION

This empirical study investigated whether using different materials (i.e., corpus-based activities) is effective with teaching Turkish upper-intermediate proficiency level teacher candidates some high level phrasal-prepositional verbs in terms of three dimensions (i.e., form, meaning, and use) of phrasal verb knowledge after six hour instruction. The purpose of the study was to determine whether six-hour instruction via corpus-based activities is effective with teaching the students the form of the verbs, teaching them the metaphorical meanings of those structures, and teaching the students how to construct the correct forms of the verbs in order to use them while paraphrasing sentences. These tests were administered to the students.

The findings indicate that six hour instruction via corpus-based activities is effective with teaching the learners these structures in terms of two dimensions (i.e., form and use). More precisely, the students in the current study were able to recognize and understand the form of the phrasal-prepositional verbs by using corpus-based activities (i.e., Hypothesis 1), and they were also able to construct the correct forms of the verbs in order to use them while paraphrasing sentences (i.e., Hypothesis 3). However, the students in the current study were not able to understand the metaphorical meanings of these structures by using corpus-based activities (i.e., Hypothesis 2). Therefore, using corpus-based activities was found not to be effective with teaching the metaphorical meanings of the verbs to the students in the current study.

Celce-Murcia (2001) suggests that in the process of learning such structures, meaning dimension is a real challenge for students. Side (1990) also claims that students fail to understand the metaphorical meaning of these structures even if language teachers try their best to help them. Hence, this study also provides further evidence that learning the metaphorical meanings of these structures is really challenging for students. This might be due to the high-frequency unknown words in the concordance lines that the students might have had difficulty in understanding in the current study, thereby having a strong influence on the misunderstanding of the phrasal-prepositional verbs. In addition, this might also be linked to the fact that six hour instruction via these sources was not enough to help the students understand the metaphorical meanings of the structures. Yet, the findings indicate that the students in the current study were able to use the corpus-based activities effectively in terms of understanding how phrasal-prepositional verbs in English are formed and constructing the correct forms of the verbs in order to use them in sentence writing.

These findings confirm the findings of the previous studies that have attempted to investigate the effectiveness of the use of corpora on language learners' vocabulary learning (e.g., Ashkan & Seyyedrezaei, 2016; Barabadi & Khajavi, 2017; Paker & Ergül-Özcan, 2017), more specifically collocation learning (e.g., Chan & Liou, 2005; Chao, 2010; Koosha & Jafarpour, 2006; Sun & Wang, 2003; Uçar & Yükselir, 2015). These studies found that the use of corpora is quite effective with teaching English vocabulary, collocations in particular, to learners. Similarly, the current study also showed that the students demonstrated significant learning in terms of recognizing and understanding the form of the phrasal-prepositional verbs and constructing the correct forms of the verbs in order to use them while paraphrasing sentences by the help of the corpus-based activities.

The findings of the current study also confirm what the DDL approach proposes. The researchers adopting the approach argue that exposing learners to contexts, which present the specific features of language, facilitate creativity and self-discovery learning among learners (Batstone, 1995). As the activities used in the current study, which consisted of the concordance lines and form-meaning-use tasks, required the students to analyse the structures in the lines, understand the metaphorical meanings of them, and construct the correct forms of them to use them while re-writing sentences on their own, it can be claimed that they facilitated the learners' self-discovery learning by showing them the target structures in some real, authentic contexts. In addition, the DDL approach was found to be quite effective with teaching the collocations of prepositions to the learners in the study of Koosha and Jafarpour (2006). Since the findings of the current study also indicate that the learners were able to use corpus-based activities effectively in order to learn the target structures, it provides further evidence that language learners can benefit from the data-driven learning.

Celce-Murcia (2001) suggests that in informal spoken discourse, native speakers of English use such structures quite often. Similarly, Quirk et al. (1985) also claim that such structures are "prevalent in everyday language" (p.1150). However, it is very challenging for language learners to learn such structures. It is claimed that

language learners avoid using them while speaking or writing in English (e.g., Cornell, 1985; Dagut & Laufer, 1985; Ganji, 2011; Liao & Fukuya, 2004; Yasuda, 2010).

Although many materials (e.g., textbooks, course books, specialized learner dictionaries of multi-word verbs) are introduced to language teachers to help their students learn these verbs, teachers are having a great difficulty in the teaching of these structures to their students. One consensus is that these materials present the structures in a way that students have to learn them by memorizing, thereby implying that there is no system to learn them easily and effectively (e.g., Ganji, 2011). However, the current study provides evidence that language teachers can make use of corpora in their classes to help their students learn these structures, even high level ones.

It should be noted at this point that the target 40 phrasal-prepositional verbs were determined by the researcher's intuition instead of administering a diagnostic test to the students in the current study. Therefore, some of the verbs might not indeed be high level phrasal-prepositional verbs for some of the students. Also, the current study failed to control the high-frequency unknown words in the concordance lines that might have had potential influence on the misunderstanding of the phrasal-prepositional verbs. Yet, the study not only provides evidence for language teachers questioning whether to use corpora to teach such structures to their learners, but it also provides some alternative and effective ways of teaching the verbs in language classrooms. For each target structure defined in the present study, corpus-based activities were prepared by the researcher by taking some concordance lines from the corpus (i.e., COCA) and preparing form-meaning-use tasks, in which the sentences were also taken from the corpus, to help the students understand the form and metaphorical meanings of the verbs and construct the correct forms of the verbs in order to use them while paraphrasing sentences. Thus, if language teachers who want to make use of corpus-based sources to teach such structures to their students are informed about these designs and principles, they can create their own corpus-based activities to teach such structures to language learners. In addition, Biber and Reppen (2002) suggest that materials developers can also use the information based on corpora in order to increase the meaningful input provided for language learners. Therefore, the present study provides further evidence for language teachers and curriculum designers who might want to consider incorporating such materials and activities into language teaching.

The present study only investigated the effectiveness of using corpus-based sources on the learners' performance on the tests. Thus, some empirical studies should definitely be conducted in order to investigate the effectiveness of learning of such structures through corpus-based sources on students' ability to use them effectively in other skills (e.g., speaking) of English. That is, the long-term effects of using corpus-based sources on students' use of such structures in speaking should be examined. In addition, as this study was conducted with upper intermediate level students, future research should concentrate on the effectiveness of using corpus-based sources on the teaching of such structures to learners at lower level of English proficiency and from different backgrounds in order to see whether there will be the same results.

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