

## A corpus-based study of phrasal verbs: CARRY OUT, FIND OUT, and POINT OUT

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### **Abstract**

This study, which is exploratory and corpus-based research, aims to investigate the grammatical patterns and the collocates of three phrasal verbs (PVs) in English, i.e., *carry out*, *find out*, and *point out*. They were chosen because the combination of the lexical verbs *carry*, *find*, and *point*, and the adverbial particle *out* put the three PVs among the top 50 PVs in the British National Corpus or BNC (Gardner & Davies, 2007), and in the Corpus of Contemporary American English or COCA (Liu, 2011). A total of 500 concordance lines were searched from COCA for each PV, and were then placed in an Excel spreadsheet for analysis. Oxford Advanced Learner's Dictionary (OALD, 2010) was used as the main reference for information about the definitions of the target PVs, as well as grammatical information and collocates. The results reveal that although most of the grammatical patterns found in this study seem to be in accordance with those displayed in OALD (2010), certain patterns are not provided in the dictionary. The reason could be the limited space of the dictionary and users' stylistic variation in PV use. Regarding the collocates of the target PVs, most of them are lexical collocation, such as nouns, pronouns, and wh-words, followed by grammatical collocation, such as preposition. Pedagogically speaking, the corpus-based data could help provide additional information not illustrated in dictionaries. In addition, learners can explore the language patterns and search for naturally-occurring samples through the use of corpora.

**Keywords:** phrasal verbs; corpus-based data; concordance lines; grammatical patterns; collocations

## A corpus-based study of phrasal verbs: CARRY OUT, FIND OUT, and POINT OUT

### 1. Introduction

Phrasal verbs (PVs) in English language are notoriously challenging for many learners of English as a foreign language (EFL) and English as a second language (ESL). They are not only abundant, but also semantically and syntactically complex. In terms of its common occurrences, based on the 100-million-word British National Corpus (BNC), Gardner and Davies (2007) pointed out that readers can find one PV in every 192 words of English, or roughly two per page of a written text. Moreover, the unpredictable combinations of verbs and particles, as well as the complexity of syntactic and semantic features of PVs (Side, 1990; Liao & Fukuya, 2004; Liu, 2011) make PVs difficult for learners to understand and result in the avoidance of PVs. More research on PVs in diverse aspects could benefit learners of English language as they can understand more about PVs and gain more confidence when using them.

The aim of this research is to investigate grammatical patterns and collocations of three target PVs, i.e., *carry out*, *find out*, and *point out*. The concordance lines, or the samples presented with the search word in the middle of the lines with seven or eight words shown at either side, were recruited from the Corpus of Contemporary American English (COCA). In addition, the Oxford Advance Learner's Dictionary (OALD, 2010) was used as the reference source of information about grammatical patterns and collocations after the data collection and data analysis from COCA were completed.

### 2. Literature Review

#### 2.1 Corpus Linguistics

There has been growing interest in the field of corpus linguistics in the past few decades. In corpus linguistics, a corpus (or corpora in the plural form) can be referred to as a principled collection of electronic texts usually stored on a computer available for qualitative and quantitative analysis (O' Keffe, McCarthy, & Carter, 2007). Conrad (1999) discussed three distinct characteristics of corpus-based research.

Firstly, corpus-based research uses a principled collection of naturally-occurring texts. Naturally-occurring texts do not only refer to written texts, but also include spoken ones or a mix of both types. Corpora can be gathered and built from various sources, such as academic textbooks, newspapers, magazines, students' work, conference, classrooms, political speeches, TV series, the Internet, etc. Aside from sources of texts, to serve the principled collection purpose, the size and design of the corpus should be emphasized to ensure that the corpus contains good representative samples and proper varieties of texts. Reppen (2010) suggested that there is no specific size of a corpus that fits all studies. Studies of common grammatical features can rely on small-size corpora, while far bigger corpora are required for the research of less common features.

Secondly, since corpora comprise a great deal of texts and they are stored on a computer, the corpus-based studies can benefit from the use of computers and specially designed software to analyze the samples from corpora. Many aspects or complex patterns of language can be discovered by using corpus software together with a researcher's judgment. Thirdly, corpus-based studies include both quantitative and qualitative analysis. Quantitative analysis helps to obtain the results, such as the number of occurrences, and the major patterns in any corpora being studied. On the other hand, the function of language or how a word or phrase is used in various situations can be achieved through qualitative analysis.

## 2.2 Definition of Phrasal Verb

Researchers and linguists have proposed various definitions of PVs (Celce-Murcia & Larsen-Freeman, 1999; Darwin & Gray, 1999; Gardner & Davies, 2007; Quirk, Greenbaum, Leech, & Svartvik, 1985). A PV, as defined by Darwin & Gray (1999), is generally “a verb + particle combination that functions as a single verb, both parts giving up meaning in order to form a new lexical item” (p. 65). Quirk et al. (1985) described a PV as a multi-word verb that possesses either syntactic or semantic features to some degree and behaves as a single grammatical form.

As far as dictionaries are concerned, a PV, according to Oxford Advanced Learner’s Dictionary (2010), is “a verb combined with an adverb or a preposition, or sometimes both, to give a new meaning” (p. 1101). Longman Dictionary of Contemporary English (2005) provides the meaning of a phrasal verb as “a group of words that is used like a verb and consists of a verb with an adverb or preposition after it” (p. 1232). Similarly, Macmillan English Dictionary for Advanced Learners (2002) defines it as “a combination of words that is used like a verb and consists of a verb and an adverb or preposition” (p. 1062). Although the definitions given by different sources differ to some degree, the variations are rather slight from a language learner’s point of view.

## 2.3 Syntactic Features of Phrasal Verbs

A PV is syntactically a lexical verb followed by morphologically invariable particle and functions as a single verb (Quirk et al, 1985). The particles can be prepositions (such as *against, among, as, at, beside, for, from, into, on top*), spatial adverbs (such as *aback, ahead, apart, aside, astray, away, back*), or prepositional adverbs (such as *about, above, across, after, down, in, off, out*). Celce-Murcia and Larsen-Freeman (1999) offered broadly three major syntactic features of PVs as follows:

### 2.3.1 Transitive and Intransitive Phrasal Verbs

Like single-unit verbs, PVs can be either transitive or intransitive. Transitive PVs can take an object, e.g. *Mercy filled in the application form*. The PV *filled in* precedes the object *the application form*. On the other hand, some PVs are intransitive as they do not require an object, e.g. *the plane took off*. In this case, the PV *took off* does not take an object. Intransitive verbs, as suggested by Eastwood (1994), are usually used to show that someone is doing something.

### 2.3.2 Phrasal Verbs that Require Prepositions

A number of PVs prefer a specific preposition; therefore, these PVs and preposition must be learned as one unit. Quirk et al. (1985) called them phrasal-prepositional verbs and suggested that “a common sign of idiomatic status ... is the existence of a one-word paraphrase” (p. 1160). Some examples are *put up with* ‘tolerate’, *look up to* ‘admire’, and *do away with* ‘abolish’. The prepositions *with, to, and with* were added to *put up, look up, and do away*, respectively, resulting in more complex PVs.

### 2.3.3 The Separability of Phrasal Verbs

A distinct syntactic feature of transitive PVs is that sometimes the direct object can be inserted between the lexical verb and the particle (separable PVs), but at other times it cannot (inseparable PVs). It is worth noting that when the direct object is a pronoun, the separation is mandatory.

In summary, the grammatical pattern of PVs can be summarized in the formula: “verb ± direct object ± adverb ± preposition” (Quirk et al., 1985, p. 1161). Table 1 illustrates and exemplifies various grammatical patterns of PVs.

**Table 1**

*Patterns of Phrasal Verbs*

	Pattern	Lexical Verb	Direct Object	Particles		Prepositional Object (prep. obj)
				Adverb (spatial or prepositional)	Preposition	
1	Phrasal verb (Intransitive)	show	-	up	-	-
2	Phrasal verb (Transitive)					-
	- Separable (1)	write	the information	down	-	-
	- Separable (2)	write	-	down	-	the information
	- Inseparable	call	-	on	-	an old friend
3	Phrasal-prepositional verb (Intransitive)	get	-	along	with	Tony (prep. obj)
4	Phrasal-prepositional verb (Transitive)	put	their success	down	to	team spirit (prep. obj)

Note. Adapted from Quirk, Leech, & Svartvik, 1985, p. 1161

*2.4 Semantic Features of Phrasal Verbs*

Quirk et al. (1985) pointed out that the meaning of PVs can often be explained with one-word verbs. They divided PVs into three main types including (a) “free, non-idiomatic construction”, where the individual meanings of the component are obvious, (b) “semi-idiomatic construction”, where the verb keeps its meaning, and the particle provides aspectual meaning, and (c) “highly-idiomatic construction”, where the combination of a verb and the particle gives special meanings.

*2.5 Collocations*

Collocation, as defined by Oxford Advanced Learner’s Dictionary (2010), is “a combination of words in a language, that happens very often and more frequently than would happen by chance” (p. 279). Benson, Benson, and Ison (2010) suggested that collocations, also called recurrent combinations or fixed combinations, are phrases and constructions that are fixed, identifiable, and non-idiomatic. They can be divided into two main groups including grammatical collocations and lexical collocations. While grammatical collocations are composed of a content word (nouns, adjectives, verbs) and a function word that is normally a preposition, lexical collocations are made up of nouns, adjectives, verbs, and adverbs. Table 2 and Table 3 present examples of grammatical and lexical collocations.

**Table 2**

*Examples of Grammatical Collocations*

1. Noun (N) + Preposition (Prep)	<i>an act of, a decrease in</i>
2. Prep + N	<i>by origin, in advance</i>
3. Adjective (Adj) + Prep	<i>aware of, fond of</i>
4. Verb (V) + Prep	<i>rely on, escape from</i>

**Table 3***Examples of Lexical Collocations*

1. V + N	<i>compose music, reject an appeal</i>
2. V + N. clause beginning with <i>that</i>	<i>I hope that she will be happy.</i>
3. V + wh-word	<i>I know what he wants.</i>
4. Adj + N	<i>strong tea, heavy rain</i>
5. N/Pronoun (Pron) + V	<i>water boils, the sun shines</i>
6. Quantifier + N	<i>a flock of birds, a piece of advice</i>
7. Adverb (Adv) + Adj	<i>bitterly cold, deeply grateful</i>
8. V + Adv	<i>walk quickly, identify accurately</i>
9. Adv + V	<i>seriously harmful, strongly recommend</i>

*2.6 Relevant Research*

Several studies (Liao and Fukuya, 2004; Gardner and Davies, 2007; Yasuda, 2010; Liu, 2011) have been carried out to investigate phrasal verbs in various aspects, such as the combination of phrasal verbs, the most frequently used phrasal verbs, and the avoidance of learners towards the use of phrasal verbs.

Gardner and Davies (2007) conducted corpus-based research on English phrasal verbs based on the 100-million-word British National Corpus (BNC) with an aim to determine the most frequent adverbial particles and lexical verbs used in phrasal verbs construction, to explore how these lexical verbs interact with various adverbial particles, to provide a list of the most frequent phrasal verbs based on overall frequency and coverage, and to approximate the number of word senses relating to each of the most frequent phrasal verbs. Their study was exploratory and informative in nature. The data gathered from BNC were divided into several sets of multi-word chunks such as two-, three-, four-, until seven-word chunks. Next, they were processed through the software to identify and report the instances where the combinations of lexical verbs and adverbial particles occur. The outcomes were then lemmatized in order to count all the possibilities of verb forms together. The outcomes from the data collection process were semantically analyzed. The results from this study showed the eight most frequent adverbial particles (i.e., *out, up, on, back, down, in, off, and over*) and 20 most frequent lexical verbs (*go, come, take, get, set, carry, turn, bring, look, put, pick, make, point, sit, find, give, work break, hold, and move*). The combination of these lexical verbs and adverbial particles accounted for 53.7 percent of all the phrasal verbs in BNC. The researchers also came up with the top 100 phrasal verb lemmas in BNC (such as *go on, carry out, set up, pick up, go back, etc.*), which make up approximately half of all the phrasal verbs in BNC, and these 100 phrasal verbs have roughly 559 various meanings, or on average 5.6 meanings per phrasal verb. The researchers finally maintained that these findings can be applied in pedagogy and future research in order to improve the instruction of English phrasal verbs.

Liu (2011) provided three limitations of Gardner and Davies' (2007) work, i.e., (1) a list of 100 high-frequency phrasal verbs derived from only the top 20 lexical verbs, (2) since the work was conducted using the data from BNC, which is a source for British English only, there might be questions as to whether the results are also true for other major English varieties, and (3) the study did not explore the phrasal verbs in diverse registers. Liu (2011) conducted multi-corpus research aiming to offer a comparative examination of the most frequently used phrasal verbs between American and British English and an investigation of their usage across registers in American English. The primary corpus used was the Corpus of Contemporary American English (COCA), and BNC was employed as a secondary corpus for comparison purposes. The 40-million-word

Longman Spoken and Written English (LSWE) corpus was also used indirectly for cross-corpora comparison. The researcher identified the frequency and usage patterns of the high frequency phrasal verbs from COCA and BNC, and then analyzed the outcomes statistically. The findings revealed a list of 150 common phrasal verbs in American and British English, which include 100 phrasal verbs from Gardner and Davies' (2007) study, and 50 additional items. The research also provided a cross-register table of those phrasal verbs that indicated which register each phrasal verb tends to occur. Furthermore, the researcher pointed out that the difference between two main corpora could result from the difference in time period of BNC covering the 1980s to 1993 and COCA ranging from 1990 to 2012. The other reason is the preference in the use of *around* and *round* in phrasal verbs between American and British English varieties: Americans favor *around* while British prefer *round*. Due to this and the fact that certain pairs of lexical verbs + *around/round* are synonymous, the researcher grouped them together, resulting in *look around* with *look round*, *turn around* with *turn round*, *come around* with *come round*, and *go around* with *go round*. Finally, the researcher offered implications for English learners, teachers, and future researchers. English learners and teachers can adopt the list of the 150 most common phrasal verbs for their learning and instructing purposes. Future research can be carried out to examine the different meanings of phrasal verbs across registers.

Liao and Fukuya (2004) carried out research with 85 students to investigate their avoidance of English phrasal verbs. Of the 85 students, 15 were native speaker undergraduate students, 30 were advanced level Chinese graduate students, and the remaining 40 were Chinese intermediate learners of English. Three kinds of tests including multiple-choice, translation, and recall were employed in the study to test students' knowledge of the lexical and figurative meanings of phrasal verbs. With the Chinese students separated into six groups, each group took one of the three tests. On the other hand, the native speaker students were assigned to take the multiple-choice test. The results showed that the intermediate learners whose L1 lacks phrasal verbs had a tendency to avoid phrasal verbs and preferred using one-word verbs, while the advanced learners did not. However, the advanced and intermediate students tended to produce more literal phrasal verbs than figurative ones as shown in the translation task. The researcher concluded that the avoidance of phrasal verbs was the result of learners' inter-language development rather than L1-L2 differences or similarities. Furthermore, the avoidance of phrasal verbs could be attributed to their semantic and syntactic difficulties. The authors also suggested that the exposure of learners to the L2 environment might help reduce the avoidance of phrasal verbs phenomenon.

Yasuda (2010), realizing that phrasal verbs is one of the obstacles for English language students despite the high frequency of their occurrence, performed a research study to investigate whether increasing the awareness of orientational metaphors of particles through the cognitive linguistic approach can help Japanese EFL students in phrasal verbs acquisition. Twenty-one phrasal verbs with the adverbial particles *up*, *down*, *into*, *out*, and *off*, namely *break down*, *burst into*, *call off*, *calm down*, *dry up*, *enter into*, *figure out*, *get off*, *keep off*, *knock down*, *leave out*, *make out*, *open up*, *pay off*, *rule out*, *run into*, *show up*, *take off*, *turn down*, *turn into*, and *use up*, were examined in this study. According to the researcher, the five particles could create orientational metaphors, i.e., (1) the particle *up* for more *visible*, *accessible*, and *completion*, (2) the particle *down* for *lowering*, *decreasing*, *defeating*, and *suppressing*, (3) the particle *into* for *changing*, (4) the particle *out* for *removing*, *excluding*, *searching*, and *finding*, and (5) the particle *off* for *departure*, *separation*, *stopping*, *cancelling*, *prevention*, and *protection*. The participants were 115 freshmen Japanese students enrolled in the English language program at the School of Liberal Arts in a private university in Tokyo, Japan. They had studied English as a foreign language for at least six years in their formal education and their average score on the Test of English as a Foreign Language (TOEFL) was 450. The students were divided into two groups: a control group comprising 56 students and an experimental group made up of 59 students. The control group received the traditional teaching method, i.e., rote learning. A teacher provided the meaning of phrasal verbs and asked students to memorize them. On the other hand, the experimental group was taught through the cognitive approach. The phrasal verbs were explained based on the orientational metaphors to which each particle contributed. After instruction, both groups of students took the phrasal verb test containing 15 taught phrasal verbs and the other 15 untaught items. The results showed that the performance of both groups, on average, was quite high and there was no significant

difference between them for the phrasal verbs they were taught before taking the test. However, for the unexposed category of phrasal verbs, the experimental group was able to outperform the control group since the experimental group was more likely to derive the meaning of phrasal verbs from metaphorical thought. The researcher concluded that the cognitive linguistic approach of enhancing the awareness of orientational metaphors could be a supplementary or facilitating strategy for students learning phrasal verbs, apart from the traditional approach of memorization.

Although many studies have examined the complications of phrasal verbs in various angles such as the combination of structures, semantic features, frequently used phrasal verbs, and the avoidance of phrasal verbs among ESL and EFL learners, very little research has been conducted to investigate the grammatical patterns and the collocations of particular phrasal verbs. The purpose of this study is to explore the grammatical patterns and collocations of three phrasal verbs, which are *carry out*, *find out*, and *point out*, based on COCA. Apart from the two main objectives of this study, the findings might show that a phrasal verb could be genre-specific. It would, therefore, raise learners' awareness towards the appropriate use of phrasal verbs in various registers or modes of communication. Finally, English language learners can adapt the methodology of this study for future research on other phrasal verbs in the same or different linguistic aspects. This would encourage students to learn English language independently.

### 3. Methodology

#### 3.1 Target Phrasal Verbs

Three phrasal verbs: *carry out*, *find out*, and *point out* were selected as the focus of this study because of the following reasons:

3.1.1 The adverbial particle *out* is among the top three most prolific adverbial particles in forming PVs (Gardner & Davies, 2007; and Zarifi & Mukundan, 2012);

3.1.2 The lexical verbs *carry*, *find*, and *point* are the top 20 lexical verb lemmas functioning in PV forms (Gardner & Davies, 2007);

3.1.3 The PVs *carry out*, *find out*, and *point out* are the top 50 phrasal verb lemmas in BNC (Gardner & Davies, 2007), in COCA (Liu, 2011), and in Malaysian ESL textbooks corpus (Zarifi & Mukundan, 2012).

#### 3.2 Materials

The corpus used for this study was the Corpus of Contemporary American English (COCA), which was created by Mark Davies, a professor of linguistics at Brigham Young University in Utah, USA. It contains 450 million words collected from 1990 to 2012, and is composed of diverse text types, i.e., spoken (Spok), fiction (Fic), magazine (Mag), newspaper (News), and academic (Acad). Researchers and learners can use the concordance lines (or samples) recruited from COCA to review the patterns of node words, as well as to analyze and make comparisons across genres or over time. In addition, Oxford Advanced Learner's Dictionary (2010) was used as the main reference for the information about the target PVs.

#### 3.3 Procedures

This study is exploratory and corpus-based research in which the concordance lines were sampled randomly from COCA. With regard to data collection, the researcher used the search features of the COCA online program at <http://corpus.byu.edu> provided by Brigham Young University to retrieve 500 concordance lines for each target PV. The criteria for the three lexical verbs and adverbial particle *out* were set to obtain the desired samples.

### 3.4 Data Analysis

To perform data analysis of the 500 concordance lines for each target PV lemma: *carry out*, *find out*, and *point out*, the researcher made use of an Excel spreadsheet. The steps were as follows:

3.4.1 The 500 concordance lines of each target PV, which were the outcomes of the query, were copied and placed on the Excel spreadsheet.

3.4.2 The concordance lines were sorted in alphabetical order of the lemma and they were then ready for analysis.

3.4.3 The researcher investigated the sorted concordance lines for the grammatical patterns and collocates of each PV.

3.4.4 The results from the previous step were summarized and compared with the information given by Oxford Advanced Learner’s Dictionary (2010).

## 4. Results

### 4.1 Distribution of PVs across Registers

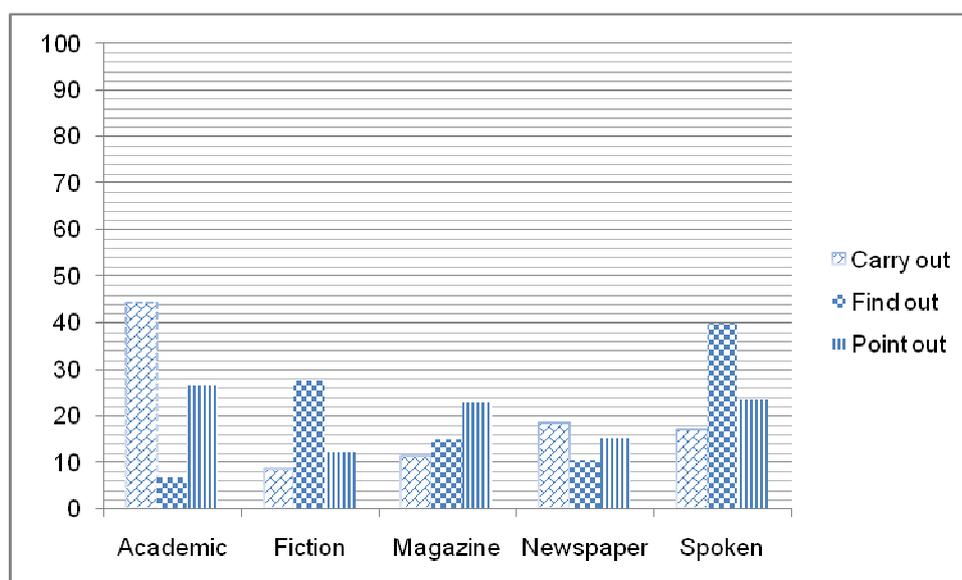


Figure 1. Percentage distribution of *carry out*, *find out*, and *point out* across registers in COCA

As illustrated in Figure 1, the word *carry out* was used strikingly much more often in the academic genre as compared to *find out*, which appeared very frequently in the spoken one. In addition, the bar graph reveals that *carry out* and *point out* seem to occur in a similar manner across different registers.

### 4.2 Grammatical Patterns

Tables 4 to 6 present the possible grammatical patterns of each phrasal verb, as compared to those shown in OALD (2010), and their frequency. The samples of concordance lines are also displayed after each table. The grammatical patterns of *carry out* listed in Table 4 are generally in accordance with those shown in OALD (2010). Moreover, the results reveal the preference of using *carry out* in an active voice (58.80%) to using it in a passive voice (41.20%).

**Table 4**

*Grammatical Patterns of Carry Out and Their Frequency*

Phrasal Verb	OALD (2010)	Present Study	Frequency	
			Token	Percentage
<i>carry out</i>	<i>carry out</i> + something (sth)	1. <i>carry/carries/carried/be carrying out</i> + sth	294	58.80%
	to be carried out + preposition (prep)	2. to be <i>carried out</i> + (prep)	206	41.20%
Total			500	100.00%

From the corpus data below, the samples of possible grammatical patterns of *carry out* are as follows:

- a. *carry/carries/carried/to be carrying out* + something (sth) as in lines 1 to 11
- b. *to be carried out* + preposition (prep) as in lines 12 to 21

Corpus data:

1	cabinet secretaries as special people who help the president to	<b>carry out</b>	his many tasks . The lesson began with the students '
2	Head lay back down , feeling entirely confident that he could	<b>carry out</b>	the moral mission of the coming day . He meant to
3	activities for their time . It may therefore be necessary to	<b>carry out</b>	a further studies to investigate the activities competing
4	from Panama , it set up several bases from which to	<b>carry out</b>	counter-drug operations . The only one in South America is
5	: Mr. President , this is an amendment that merely	<b>carries out</b>	the intent that Congress has shown on many occasions to
6	we mean that form of interrelation between hero and author which	<b>carries out</b>	the task of creating a whole hero as a defined personality
7	regards VTE , evidence of an association is inconclusive . We	<b>carried out</b>	a hospital-based case-control study to investigate
8	to cause melting at low temperatures . Bowden and Hughes	<b>carried out</b>	an extensive set of experiments in a cave dug out of
9	was nothing found of planned violence or that they had ever	<b>carried out</b>	" any attacks . " But they were in a position
10	that would conflict with our principles . If they 're	<b>carrying out</b>	the regulations , we 'll obey that . But where they
11	the current mission of the Space Shuttle Columbia , which is	<b>carrying out</b>	science experiments in orbit . And the astronauts are
12	, seals , medals , and coins . Additional research was	<b>carried out</b>	by de Succa in 1608 and 1615 . The annotated drawings
13	e-mailing for help if they are confused . Projects that are	<b>carried out</b>	by groups provide further opportunities for training ,
14	mentally ill people turn to violence , and some violence is	<b>carried out</b>	by people not mentally ill , but sometimes this is the
15	limited to its administrative goals , and if the search is	<b>carried out</b>	in a reasonable manner . 102 # United States v.
16	in 1997 to ensure that student-centered education be	<b>carried out</b>	in all kinds and at all levels of education in keeping
17	that , in fact , the sentence itself imprisonment should be	<b>carried out</b>	in the courts of the country where the crimes were committed
18	tonsillectomy and conventional tonsillectomy . The study was	<b>carried out</b>	on 28 patients with recurrent tonsillitis and/or
19	Education . A two week test retest reliability method was	<b>carried out</b>	on the respondents . The two weeks interval was to ensure
20	In the last part of data analyses , discriminant analyses were	<b>carried out</b>	to differentiate bilingual listeners who performed well
21	as human shields . The operation was meticulously planned and	<b>carried out</b>	to protect the innocent lives of children and women who were

**Table 5**

*Grammatical Patterns of Find Out and their Frequency*

Phrasal Verb	OALD (2010)	Present Study	Frequency	
			Token	Percentage
<i>find out</i>	<i>find out</i> + wh-word clause	1. <i>find/finds/found out</i> + wh-word clause	191	49.48%
	<i>find out</i> + that clause	2. <i>find/finds/found/be finding out</i> + (that) clause	95	24.61%
	<i>find out</i> + (about + sth/sb)	3. <i>find/finds/found out</i> + (about + sth/sb)	53	13.73%
	<i>find out</i> + sth + (about sth/sb)	4. <i>find/finds/found out</i> + sth + (about sth/sb)	34	8.81%
	-	5. <i>find/finds/found out</i> + from + sb/sth	8	2.07%
	-	6. <i>find out</i> + for sth	3	0.78%
	-	7. <i>find/finds/found out</i> + unless	1	0.26%
	-	8. to be <i>found out</i>	1	0.26%
Total			386	100.00%

As shown in Table 5, the majority of the possible patterns of *find out* are those presented in the OALD (2010). These patterns account for approximately 97 percent of the total concordance lines being summarized. The remaining grammatical patterns, accounting for 3 percent, are not shown in OALD (2010). In addition, the results reveal that the occurrences of the phrasal verb *find out* tend to be in an active voice rather than in a passive voice.

From the corpus data below, possible grammatical patterns of *find out* are as follows:

- |  |                      |
|--|----------------------|
| a. <i>find/finds/found out</i> + wh-word clause                | as in lines 22 to 36 |
| b. <i>find/finds/found/be finding out</i> + <i>that</i> clause | as in lines 37 to 40 |
| c. <i>find/finds/found out</i> + (about + sth/sb)              | as in lines 41, 42   |
| d. <i>find/finds/found out</i> + sth + (about sth/sb)          | as in lines 43 to 46 |
| e. <i>find/finds/found out</i> + unless                        | as in line 47        |
| f. <i>find/finds/found out</i> + from + somebody (sb)          | as in lines 48, 49   |
| g. <i>find out</i> + for + sth                                 | as in lines 50, 51   |
| h. to be <i>found out</i>                                      | as in line 52        |

It is to be noted that the clause marker *that* is sometimes omitted as in lines 39 and 40.

Corpus data:

22	lunch hour is up , we walk back over to	<b>find out</b>	how many orders have come in . If a lot of orders
23	their movie , " Photo Finish , " and to	<b>find out</b>	how they worked a rubber duck into the film , visit our
24	. For the basic research that would enable us to	<b>find out</b>	how to control these cells , how to get them to differentiate
25	outset of todays hearing that the panel is determined to	<b>find out</b>	what caused the collapse . PHIL-ANGELIDES-Ch : To conduct a
26	even the police fear to tread . She went to	<b>find out</b>	what happened to the love of her life . # Donato died
27	job . When we return , we 're going to	<b>find out</b>	what it really takes to be a police officer from two of
28	Friday , we 've just been kind of waiting to	<b>find out</b>	when we were going to be evacuated or how we were going
29	not do that ? Then the American people could really	<b>find out</b>	whether the candidates understand the issues , whether the
30	free labor here on the side and you get to	<b>find out</b>	whether you enjoy making beds , cleaning toilets , making scones
31	such a test for the puppies that it breeds to	<b>find out</b>	which ones would make good guide dogs . Let 's find out
32	papers in a shiny waterproof bag . " Now I	<b>find out</b>	who gets seasick . You want a life jacket ? You 're
33	in Wexford , Pa . " It inspired me to	<b>find out</b>	who I really am and where my identity really is . "
34	and Christel Neukirche would like to see their file to	<b>find out</b>	whose information sent Hans , a truck driver , to jail and
35	to the next eager young person . Eventually they 'll	<b>find out</b>	why they die . Offer enough money , people will do what
36	, it is often extraordinarily difficult for donors to	<b>find out</b>	where their own money has gone or what it has achieved. 5
37	It 's basically kind of -- you know , to	<b>find out</b>	that someone close to you would do something like this , it
38	having to experience that again . And we come to	<b>find out</b>	that they were doing the exact things they were criticizing
39	, ' Mr. Egan said . " Subsequently , you	<b>find out</b>	it will cost you another \$5,000 a year to maintain it .
40	dorms . I was 19 years old . I just	<b>found out</b>	I was pregnant . My body did n't go through the normal
41	was really serious about singing , he would have to	<b>find out</b>	about Louis Armstrong , a young trumpet player and singer in
42	is almost always a dangerous combination . Eduard never	<b>found out</b>	about my extracurricular activities , but we did find ourselves
43	Buffett ? Call him up , meet with him ,	<b>find out</b>	his secrets . Readers will love it . # Me : Oh
44	mother who 's always been very cold and distant ,	<b>finds out</b>	these incredible secrets about her parents . And I think a lot
45	my father . When my father passed away , I	<b>found out</b>	several things about him . Among them that he had been a
46	, " I said with exaggerated patience , " to	<b>find out</b>	something about your people . Why , for instance , they delight
47	# The offense is fine . ' You do n't	<b>find out</b>	unless you play good people . What good is false confidence ?
48	I arrive at an Amish community or function , I	<b>find out</b>	from a knowledgeable source if this is a liberal or conservative
49	was tell me to my face . I have to	<b>find out</b>	from Nana . In a phone call . " # Frances could
50	were made for some good purpose , which we must	<b>find out</b>	for ourselves . When the doctor does not know what medicine to
51	. Let them reach their own limits . Let them	<b>find out</b>	for themselves . That 's the purpose of life -- to grow
52	, intense and sharp : " It can not be	<b>found out</b>	. " // In the first moments of cold , with the

**Table 6**

*Grammatical Patterns of Point Out and Their Frequency*

Phrasal Verb	OALD (2010)	Present Study	Frequency	
			Lines	Percentage
point out	<i>point out</i> + (to sb) + <i>that</i> clause	1. <i>point/points/pointed out</i> + (to sb) + <i>that</i> clause	254	53.92%
	<i>point out</i> + sth	2. <i>point/points/pointed out</i> + sth + (about)	80	16.99%
	-	3. as + sb + <i>point/points/pointed out</i> , + clause	52	11.04%
	-	4. sentence component, as + sb + <i>points/pointed out</i> , sentence component	13	2.76%
	-	5. clause, as + sb + <i>points/pointed out</i>	3	0.64%
	"speech," + sb + <i>pointed out</i> .	6. "speech," + sb + <i>point/points/pointed out</i>	34	7.22%
		7. "sentence component," sb + <i>point/points/pointed out</i> , "sentence component"	11	2.34%
		8. "speech," <i>points out</i> + subject	2	0.42%
		9. sb + <i>point/points/pointed out</i> , "speech"	1	0.21%
	-	10. <i>point/points/pointed out</i> + (to sb) + wh-word clause	16	3.40%
	-	11. to be <i>pointed out</i> + (by + sb)	5	1.06%
Total			471	100.00%

Moving on to Table 6, Pattern 1 “*point/points/pointed out* + (to sb) + *that* clause” is the major structure accounting for slightly above half the total of concordance lines, followed by Pattern 2 “*point/points/pointed out* + sth + (about)”, which is around 17 percent. Patterns 3, 4, and 5, in general, deal with a fragment “as + sb + *point/points/pointed out*” and a clause. The fragment “as + sb + *point/points/pointed out*” can precede, follow, and appear between the two broken parts of a clause. In this group, Pattern 3 scores the highest in frequency (11.04%). Patterns 6, 7, 8, and 9 involve direct speech (“speech”) and the information about who the speaker is (sb + *point/points/pointed out*, or *points out* + sb). Similar to Patterns 3, 4, and 5, the information about who is speaking in Patterns 6, 7, and 9 can precede, follow, and appear between the two broken pieces of direct speech. However, in Pattern 8, the information about who is speaking is put after a direct speech. From this subcategory, Pattern 6 occurs with the highest frequency.

From the corpus data below, possible grammatical patterns of *point out* are as follows:

- |    |   |                      |
|----|---|----------------------|
| a. | point/points/pointed out + (to sb) + that                                 | as in lines 53 to 56 |
| b. | point/points/pointed out + sth + (about)                                  | as in lines 57, 58   |
| c. | as + sb + point/points/pointed out, + clause                              | as in lines 59, 60   |
| d. | sentence component, as + sb + points/pointed out, sentence component      | as in lines 61, 62   |
| e. | clause, as + sb + point/points/pointed out                                | as in line 63        |
| f. | “speech,” + sb + point/points/pointed out                                 | as in line 64, 65    |
| g. | “sentence component,” sb + point/points/pointed out, “sentence component” | as in lines 66, 67   |
| h. | “speech,” points out + subject  | as in line 68        |
| i. | sb + point/points/pointed out, “speech”                                   | as in line 69        |
| j. | point/points/pointed out + wh-clause                                      | as in lines 70, 71   |
| k. | to be pointed out + (by + sb)   | as in lines 72, 73   |

Corpus data:

53	" the radio says , and I stifle an urge to	<b>point out</b>	to my guides that we are in the area . "
54	the profession . However , Reschly and McMaster-Beyer ( 1991 )	<b>point out</b>	that Brown and Minke 's (1986 ) conclusion has not
55	correcting them . Countermeasures hate me , because I 'm forever	<b>pointing out</b>	that it 's iced tea , not ice tea . And
56	, he paid those taxes , George , when it was	<b>pointed out</b>	he had made a mistake on the taxes . The mistake
57	. The teacher can draw the symbol on the board and	<b>point out</b>	its visual features , or have a student come to the
58	, and I did n't beat him up . I simply	<b>pointed out</b>	some serious shortcomings and made a record . At the end
59	the budget of the city , and then , as you	<b>point out</b>	, he was caught in a hotel locally by a sting
60	Petroleum Council study of 1981 . As Goerold ( 1987 )	<b>points out</b>	, petroleum production costs (like petroleum prices ) are
61	Occasionally , it is true , as our own work has	<b>pointed out</b>	, that a timid textbook publisher might make a mistake in
62	behavior : " The function of meditation , as the Buddha	<b>points out</b>	, is to act as a mirror to what is .
63	our lack of understanding of the military , as Walsh rightly	<b>points out</b>	. What is not understood is that the military has long
64	. # " I 'm not a priest , " Bernard	<b>pointed out</b>	. " I 'm just a kid . " # "
65	" Kids learn to adapt to new situations , " Epstein	<b>points out</b>	. " In fact , on average they do it even
66	energy strategy . " If we had that , " Smith	<b>points out</b>	, " we just might not need the oil from ANWR
67	. " The White House chief of staff , " he	<b>pointed out</b>	, " is not the campaign chairman . " Thus the
68	is no barrier-free access to lots of public places , "	<b>points out</b>	Zheng Gongcheng , head of the department of Disabilities
69	leaders who participated in the convention . // Jackson	<b>pointed out</b>	, " Even with the abounding wealth we now see in
70	of Nevada , Las Vegas , certainly thinks so . He	<b>points out</b>	how Rockwell employs a pictorial strategy invented in
71	class . FLATOW: Right . HYNEMAN: Yeah , if only to	<b>point out</b>	what we did wrong , which we 're perfectly OK with
72	affection , support , experiences and information are also	<b>pointed out</b>	by Okuma as some of the most -- if not the
73	was not acted upon , or a prescribing error that was	<b>pointed out</b>	by a colleague or the pharmacist # ACTIVITY 3 Using the

In summary, the grammatical patterns revealed from the present study are generally in accordance with those presented in OALD (2010). However, there are a few differences between both of them, which are highlighted in grey. This might be due to the fact that the dictionary has limited space, and it is probably not the main purpose of a dictionary to illustrate all the possible patterns.

4.3 Collocations

The researcher summarizes the frequency of collocates of the target PVs in Table 7. Their main collocates differ in types where 1) prepositions and object nouns are the first three common collocates of *carry out*, 2) subject nouns/pronouns, wh-words, and *that* clause are collocates of *find out*, and 3) *that* clause and subject nouns/pronouns are collocate with *point out* with the highest and second-highest frequency respectively. It is also worth noticing that adverbs do not co-occur frequently with these PVs. Examples of collocates of *carry out*, *find out*, and *point out* from this study are given in Table 8.

**Table 7**

*Summary of Different Types of Collocates That Co-Occur With the Target Phrasal Verbs*

Frequency of the collocation	Phrasal verb (PV)		
	<i>Carry out</i>	<i>Find out</i>	<i>Point out</i>
Grammatical collocation			
1. Phrasal verb (PV) + preposition	137	73	38
Lexical collocation			
1. PV + noun	111	15	26
2. noun/pronoun + PV	50	223	187
3. PV + adverb	14	17	11
4. adverb + PV	4	11	14
5. PV + <i>that</i> clause	-	95	237
6. PV + wh-words	5	191	16

**Table 8**

*Examples of Collocates That Co-Occur With the Target Phrasal Verbs*

Example of collocates	Phrasal verb (PV)		
	<i>Carry out</i>	<i>Find out</i>	<i>Point out</i>
Grammatical collocation			
1. Phrasal verb (PV) + preposition	<i>by, in, on, with</i>	<i>about, from</i>	<i>to, in, by</i>
Lexical collocation			
1. PV + noun	<i>attacks, operations, duties, mission, orders, studies, study, tasks</i>	<i>way, answer, information, secrets, something, things</i>	<i>marks, something, areas, passage, places, relationship, shortcomings</i>
2. noun/pronoun + PV	<i>We, they, I</i>	<i>I, we, you, he, they</i>	<i>he, I, she, you, it, we</i>
3. PV + <i>that</i> clause	-	<i>that</i>	<i>that</i>
4. PV + wh-words	-	<i>what, who, how, if, where</i>	<i>how, what</i>

## 5. Discussion, Conclusion, and Recommendations

### 5.1 Discussion

*Grammatical Patterns of the Target Phrasal Verbs* - According to the information and examples from OALD (2010), the three target PVs are syntactically transitive and separable. This means that they can take a direct object and it can be placed either after the phrasal verb, or between a lexical verb and an adverbial particle (Quirk et al., 1985). However, the current study does not focus on the separability feature of the three PVs. Most of the major patterns from this study are included in OALD (2010), while some grammatical patterns are not illustrated in OALD (2010). This may be attributed to the limited space of the dictionary or stylistic variations of PV use in users' writings or utterances, which are not covered in the dictionaries consulted, e.g., the passive voice pattern of the three PVs and the variants in the use of reported speech in the case of the PV point out.

*Collocates of the Target Phrasal Verbs* - With regards to the collocates of the target PVs, the high-frequency collocates obtained from this study are parts of the major grammatical patterns (*carry/carries/carried/be carrying out* + sth, *find/finds/found out* + wh-words, and *point/points/pointed out* + (to sb) + that clause). The findings show that a combination of words that co-occur very frequently rather than by chance could eventually form a fixed or identifiable construction as suggested by OALD (2010), and Benson, Benson, and Ilson (2010), and would lead to a kind of natural-sounding verbal and written expression.

### 5.2 Conclusion

The following conclusions can be drawn from the data.

- Whereas dictionaries are great sources of word meanings, this kind of reference does not provide a comprehensive list of all grammatical patterns and collocates of any particular word. The concordance lines from language corpora could serve as a supplement to the dictionaries to explore naturally-occurring examples. On some occasions, novel aspects of language or grammatical patterns have been discovered from the qualitative analysis of the present study.
- Despite being under the same classification as phrasal verbs, the target words carry out, find out, and point out differ in terms of the text types in which they usually appear, grammatical patterns, and words that collocate with them.
- In the current study, there was a close relationship between the major collocates and the frequently-used grammatical patterns of carry out, find out, and point out.

### 5.3 Pedagogical Implications

Although teaching is not the primary concern of this study, the following could be applied to English language pedagogy.

- In corpus-based studies, the samples from the corpora can be used to analyze quantitatively and qualitatively to obtain diverse aspects and patterns of a language. Instead of relying heavily on intuition or dictionaries alone, teachers can benefit from corpus-based data to provide authentic language examples for their students.
- An inductive learning approach can be promoted by the use of language corpora. Teachers can assign students to observe patterns given by the corpora and make generalizations about language use and forms (O'Keeffe, McCarthy, & Carter, 2007).

#### 5.4 Recommendations

Based on the findings and conclusions of this study, the following recommendations are made for future research.

- In this study, the researcher employed only one American-English corpus, namely COCA, with a query of 500 concordance lines. More interesting results in terms of grammatical patterns and collocations could be discovered if a variety of corpora is used and the search includes a greater number of concordance lines.
- As the meaning of PVs was not the main objective of this study, future research could focus on their semantic features.
- The researcher did not query for a separability feature of the target PVs, i.e., they can have one or more words inserted between the lexical verbs and the adverbial particle. Future research may include this aspect in the investigation.

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