

A Corpus-Based Study of English Synonyms: Appropriate, Proper, and Suitable

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Abstract

This study investigates three English synonyms, i.e. *appropriate*, *proper*, and *suitable*, concentrating on meanings, degrees of formality, collocations, and grammatical patterns. The sources of data used in this study are 1) three dictionaries, i.e. Longman Dictionary of Contemporary English 6th edition (2014), Longman Advanced American Dictionary 3rd edition (2013), and Macmillan Collocations Dictionary (2010), and 2) the Corpus of Contemporary American English (COCA). It was discovered that the three synonyms share the same core meaning, but still differ in terms of detailed meanings, degrees of formality, collocations, and grammatical patterns. For this reason, the three words cannot be used interchangeable in all contexts. In addition, it was found that the corpus provides some additional data which is non-existent in the three dictionaries.

Keywords: synonyms, corpus, sources of data, dictionaries

Introduction

It is generally accepted that English has now become a lingua franca, a language used for international communication by people of different nations. It turns out that now English is so commonly used that native speakers are outnumbered by second or third language users (Harmer, 2007).

Vocabulary is considered the most important element of English language learning, as suggested by David Wilkins (1972, p.111), “without grammar very little can be conveyed, without vocabulary nothing can be conveyed.” This implies that vocabulary is essential to communication. Without it, successful communication is impossible.

However, to master English vocabulary usage is not easy because English vocabulary has a number of synonyms – words which have similar meanings. Synonymy is one of the difficulties learners always find in vocabulary learning (Laufer, 1990). The way synonyms can be distinguished is determined by dialects, styles or degrees of formality, connotations (Jackson & Amvela, 2000), and grammatical patterns (Phoocharoensil, 2010).

Among countless words in sets of synonyms, three words – *appropriate*, *proper*, and *suitable* – appeal to our research interest. These words are listed in the most important 9000 words to learn and are in the top 3000 most frequent words (Longman Dictionary of Contemporary English, 2014). Moreover, from the researchers’ English teaching experience, questions regarding how to distinguish *appropriate*, *proper*, and *suitable* have often been raised during class. However, the answers given to students are based on intuition only; no concrete academic evidence is provided. For this reason, it would be worth studying these three synonyms systematically by using dictionaries and corpus data as the major data sources.

A number of previous studies were conducted to identify words in sets of synonyms. However, some studies cover only a few criteria for distinguishing synonyms, such as meaning and collocation only, while others are based on corpus data only – they do not include any data from dictionaries. In order to fill the gaps and gain a thorough understanding of how *appropriate*, *proper*, and *suitable* can be differentiated, the study investigated the similarities and differences between these synonyms according to their meanings, degrees of formality, collocations, and grammatical patterns. The data were obtained from Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), Macmillan Collocations Dictionary (2010), and Corpus of Contemporary American English (COCA) and were thoroughly considered. Finally, the data obtained from the three dictionaries were compared with those obtained from the Corpus of Contemporary American English (COCA).

Objectives of the Study

This study was intended for two main purposes:

1. To examine the similarities and differences between *appropriate*, *proper*, and *suitable* in terms of meanings, degrees of formality, collocation, and grammatical patterns
2. To compare and contrast the data obtained from the learner's dictionaries with those obtained from the corpus

Literature Review

Oxford Advanced Learner's Dictionary 9th edition (2015, p. 1589) defines synonym as “a word or expression that has the same or nearly the same meaning as another in the same language.” With this definition, it can be stated that words can be considered synonyms if they have similar meanings.

Palmer (1997) stated that the English language contains a large number of synonyms because, historically, its words are derived from many other languages, thus having pairs of native and foreign words which refer to the same things.

Strict and Loose Synonymy

Synonyms can be classified into two main types: strict and loose synonyms.

Strict synonyms refer to words that can substitute each other in all contexts. This substitution does not produce changes in meaning, style, or connotation of the message (Jackson & Amvela, 2000). However, strict or real synonyms are hard to find or may be even non-existent. As Palmer (1997) suggested, real synonyms are non-existent because it is almost impossible that words which share exactly the same meaning would still be in use. Likewise, Kreidler (1998) stated that no two words share all the same linguistic features, and it would be useless to have two words which can completely substitute each other in all cases.

Loose synonyms, on the other hand, refer to words that show overlapping meaning but cannot be used interchangeably in all contexts (Jackson & Amvela, 2000). When speaking of synonyms, linguists commonly refer to this type. To illustrate this, a pair of *find* and *discover* is a good example. Although similar in core meaning, *find* cannot substitute *discover* in all contexts, and vice versa. For example, *found* cannot replace *discovered* in the sentence, “Marie Curie *discovered* radium in 1898.” The difference in detailed meaning shows that *find* means “experience something in some way,” while *discover* means “be the first one to come across something” (Jackson & Amvela, 2000, p. 94).

Criteria for distinguishing synonyms

Synonyms can be distinguished by the following criteria:

Degree of Formality

Words in a set of synonyms may share similar meanings but differ in terms of formality degree. That is to say, some words are commonly used in formal contexts, while others are more likely to be found in informal contexts. Similarly, some words are considered slang words and are common in spoken English, while others are standard terms (Jackson & Amvela, 2000). The following examples are synonyms differentiated by degree of formality:

Formal
benevolent
endeavor
beverage
abominate

Informal
kind
try
drink
hate

(Longman Dictionary of Contemporary English, 2014)

Standard English
astonished
crash
destroy
drunk

English slang words
gobsmacked
prank
zap
sloshed

(Jackson & Amvela, 2000)

The distinguishing features between formal and informal contexts can be based on the following criteria:

Formal language contains the following features:

- Containing many words which are derived from French, Latin, and Greek
- Being greater in preciseness than informal language
- Avoiding referring directly to the writers or the readers and not using the pronouns *I*, *you*, and *we*
- Having its own grammatical features, such as the use of *whom* to refer to objects, the placing of preposition at the beginning a clause, passives, sentences that begin with introductory *it*, and the frequent use of abstract nouns

(Leech and Svartvik, 2002)

Informal language contains the following features:

- Being imprecise and being obvious in the use of imprecise phrases such as *a lot of*, *a long time*, *things*, *etc.*, or *so on*
- Containing idioms or colloquial words such as *kids* or *boss*
- Being personal and being obvious in the use of personal expressions such as *I think* or *they say*
- Containing contracted verb forms such as *don't* or *can't*
- Containing two-word verbs such as *go on* or *bring up*
- Containing question forms such as *Why did war break out in 1914?*

(Bailey, 2006, p. 152-153)

Collocations

Longman Dictionary of Contemporary English (2014, p. 336) defines *collocation* as “the way in which some words are often used together, or a particular combination of words used in this way.” According to O’Dell and McCarthy (2008), collocation is the way words naturally co-occur with others. For example, *pay* usually combines with *attention*, and *commit* usually collocates with *crime*.

Words in a set of synonyms may commonly co-occur with different collocates. Palmer (1997) suggested that some synonyms differ because they have collocational restrictions. In other words, they are supposed to co-occur with particular words. To illustrate this point, *rancid* is found to be in conjunction with *bacon* or *butter*, while *addled*, its synonym, is found to be in pair with *eggs* or *brains*.

Grammatical patterns

This criterion for distinguishing synonyms has been proposed by Phoocharoensil (2010). It is suggested that words in a set of synonyms, although sharing the same core meaning, do not constitute all the same grammatical patterns. The two phrases, *consist of* and *be made up of*, denote the same literal meaning, which is “to be formed from two or more things or people” (Longman Dictionary of Contemporary English, 2014, p. 37). However, these two phrases cannot be used in all the same grammatical structures. It is correct to use *consist of* in active constructions, as in “My family *consists of* four people,” but its occurrences in passive voice, as in “My family *is consisted of* four people” results in ungrammaticality. Likewise, *made up of* is always used in passive structures, as in “My family *is made up of* four people,” while it is impossible for it to occur in active voice, as in “My family *makes up of* four people.”

Corpus linguistics and the study of synonyms

Corpus linguistics also contributes to the study of synonyms. According to Lindquist (2009), corpus linguistics is a methodology through which a particular language is studied for its real usage. This linguistic method allows for empirical language study, hence the comprehensive understanding of linguistic features, such as grammar and lexis and the development of relevant fields, such as discourse analysis and language teaching (O’Keeffe, McCarthy and McCarthy, 2007).

Moon (2010) suggests that, with corpora, it is possible to identify the differences between synonyms by investigating linguistic features of synonyms: genres, word frequency, phrases, and collocation. For example, corpus data shows that *asylum* and *refuge* share the same basic meaning, which is *place of safety*. However, the data reveals that these two synonyms do not have all the same collocates. Although both *asylum* and *refuge* collocate with *seek*, only *refuge* can collocate with *take*, while *asylum* cannot.

Previous studies

A number of studies have focused on investigation into synonym differentiating through corpus-based data drawn from different sizable corpora, e.g. the Corpus of Contemporary American English (COCA) or the British National Corpus (BNC). The most common criteria most of the researchers used to differentiate synonyms were meanings and senses of meanings, collocations, grammatical patterns, and formality degree.

Some researchers investigated only corpus-based data to identify similarities and differences between synonyms. For example, Taylor (2003) investigated two synonyms: *high* and *tall* to investigate differences in their senses of meaning. The data was derived from the Lancaster-Oslo/Bergen Corpus (LOB). The results of the study indicate that *high* is found to be almost ten times more frequent than *tall* and that *high* in non-spatial domains which show sense of verticality such as *high number*, *high temperature*, etc. *Tall*, in contrast, is less

associated with metaphorical sense. In terms of spatial uses, *high* can indicate vertical extent as well as vertical position such as high building (vertical extent) and high ceiling (vertical position). *Tall*, unlike *high*, indicates vertical extent only.

Chung (2011) studied two synonyms: *create* and *produce*, obtaining the data from the Brown Corpus and the Frown Corpus. The results of the study show that both *create* and *produce* mostly occur with as a bare infinitive and in the -ed forms and have two overlapping senses of meaning, which are 'bring into existence/cause to happen, occur, or exist' and 'create or manufacture a man-made product.' However, the objects that follow *create* and *produce* are different. *Create* seems to be followed by abstract objects in fewer quantity and with higher possibility of creativity, while *produce* is usually followed by objects produced in greater quantity with low level of creativity.

Cai (2012) investigated *great* and its six synonyms: *awesome*, *excellent*, *fabulous*, *fantastic*, *terrific*, and *wonderful*. The data was drawn from the Corpus of Contemporary American English (COCA). The results demonstrate that *great* is used more frequently than the other synonyms. The meaning of *great* is more general and weaker than the others. *Fabulous*, *fantastic*, *great*, *terrific*, and *wonderful* seem to occur in spoken genre, while *awesome* and *excellent* are common in magazines. These synonyms have different numbers of adverb collocates and have some overlapping noun collocates.

Apart from the studies that focus on corpus-based data, there are studies which used dictionaries as another data source.

Bergdahl (2009) investigated three synonyms: *beautiful*, *handsome* and *good-looking*. The data was collected from five contemporary dictionaries and the Corpus of Contemporary American English (COCA). The results demonstrated that the three words have the same core meaning, "pleasing to look at." However, *beautiful* is more associated with a woman than a man, while *handsome* is used more often with a man. *Good-looking* is considered gender-neutral by the dictionaries, but in the corpus samples, it is used with men more often. In terms of connotation, *handsome* is sometimes used with a woman to show masculine features.

Thamratana (2013) examined five synonyms: *reduce*, *decrease*, *diminish*, *dwindle* and *decline* in terms of meanings, grammatical patterns and formality degree. The data was collected from Oxford Advanced Learner's Dictionary (2010), Longman Dictionary of Contemporary English (2005), and the Corpus of Contemporary American English (COCA). It was found that these five synonyms share the same core meaning but occur with some different grammatical patterns and collocates. The data showed that *decrease* and *decline* are relatively more formal and that, in an academic context, *decrease* was found more frequently than *reduce*, *decline*, *diminish* and *dwindle*.

In some studies, the data drawn from dictionaries were compared with those drawn from corpora. The results suggested that corpora provide more information about words in a set of synonyms than dictionaries.

Phoocharoensil (2010) studied five synonyms, i.e. *ask*, *beg*, *plead*, *request* and *appeal*. The data, collected from three learners' dictionaries and a corpus, showed that although these words share the same core meaning, they differ in terms of connotations, styles, dialects, grammatical patterns, and collocations, and that the corpus-based data provides more information than the dictionaries.

The results of this study that corpora yield more information than dictionaries are consistent with the results found by Chanchotphattha (2013), who investigated three synonyms: *different*, *diverse*, and *various*, comparing the data from the Oxford Advanced Learner's Dictionary (8th Edition International Student's Edition, 2010) (OALD) and the British National Corpus (BNC) and those suggested by Aroonmanakun (2015), who

examined two synonyms: *quick* and *fast*, deriving the data from Longman Dictionary of Contemporary English and the Corpus of Contemporary American English.

These previous studies shed light on how to differentiate words in a set of synonyms using different criteria and two sources of data, i.e. dictionaries and corpora.

Data Collection and Analysis

In conducting this study, *appropriate*, *proper*, and *suitable* were examined for their meanings, degree of formality, collocations, and grammatical patterns. The data was derived from the three learner's dictionaries and concordance lines. The selected dictionaries are Longman Dictionary of Contemporary English 6th edition (2014), Longman Advanced American Dictionary 3rd edition (2013), and Macmillan Collocations Dictionary (2010). In this study, Longman Dictionary of Contemporary English 6th edition (2014) and Longman Advanced American Dictionary 3rd edition (2013) were supposed to provide information about meanings, degree of formality, collocations, significant grammatical patterns. Macmillan Collocations Dictionary (2010) was supposed to yield information about collocations and grammatical structures.

In addition to the three dictionaries, the Corpus of Contemporary American English (COCA) was the other significant data source. Three hundred concordance lines of each synonym were investigated. These concordance lines were put into AntConc, a corpus-analysis software program. The software helped to sort out the synonyms in contexts so that it would be easier to analyze them. The corpus-based data demonstrated information about word frequency, degree of formality, collocations, and grammatical patterns.

After the investigation was completed, the data from the three dictionaries and that from the corpus were compared. It was expected that the corpus provided much more information than the three dictionaries. However, this does not mean that the corpus covers all the information about these particular words. Because only 300 concordance lines of each word were used for this study, there may be some collocations and grammatical patterns which really exist but cannot be found in these concordance lines.

Results and Discussion

Based on the criteria used in this study, the results of the study are discussed in terms of meanings, degree of formality, collocation, and grammatical structures.

Meanings

Longman Dictionary of Contemporary English 6th edition (2014) and Longman Advanced American Dictionary 3rd edition (2013) were used as a main source of the study in this respect. It was found that *appropriate*, *proper*, and *suitable* share the same core meaning, i.e. *being right* or *acceptable* but differ in detailed meanings.

Table 1

Meanings of appropriate, proper, and suitable from Longman Dictionary of Contemporary English (2014) and Longman Advanced American Dictionary (2013)

Synonyms	Meanings	
	Longman Dictionary of Contemporary English (2014)	Longman Advanced American Dictionary (2013)
Appropriate	correct or suitable for a particular time, situation, or purpose (p. 75)	correct or right for a particular time, situation, or purpose (p. 75)

Synonyms	Meanings	
	Longman Dictionary of Contemporary English (2014)	Longman Advanced American Dictionary (2013)
Proper	[only before noun] right, suitable, or correct socially or legally correct and acceptable [only before noun] (British English, spoken) real, or of a good and generally accepted standard <i>proper to something</i> (formal): suitable for something very polite, and careful to do what is socially correct (p. 1452)	[only before noun, no comparative] right, appropriate, or correct socially correct and acceptable very polite, and careful to do what is socially correct <i>proper to something</i> (formal): natural or normal in a particular place or situation (p. 1362)
Suitable	having the right qualities for a particular person, purpose, or situation (p. 1837)	having the right qualities for a particular person, purpose, or situation (p. 1714)

In addition to the information in Table 1, the thesaurus box in Longman Dictionary of Contemporary English (2014) shows how these three synonyms are different (p.1837).

Table 2

Meanings of appropriate, proper, and suitable from the thesaurus box of Longman Dictionary of Contemporary English (2014)

Synonyms	Meanings	Examples
Appropriate	suitable for a particular purpose (<i>Appropriate</i> is more formal than <i>suitable</i> .) (p. 1837)	It may not be an <u>appropriate</u> time to ask him about it. She filled out all the <u>appropriate</u> forms. (p.1837)
Proper	the proper tool, piece of equipment, or way of doing something is the one that most people think is most suitable (p. 1837)	You can't change a wheel without the <u>proper</u> tools. the <u>proper</u> procedure for hiring staff (p. 1837)

Synonyms	Meanings	Examples
Suitable	having the right qualities for a purpose or person (p. 1837)	a <u>suitable</u> place for a picnic They don't consider him a <u>suitable</u> husband for their daughter. (p. 1837)

According to table 1 and 2, generally, *appropriate*, *proper*, and *suitable* seem to have the similar core meaning, i.e. *being right or acceptable*. However, differences can be identified. As the two tables illustrate, *proper* shows more detailed meanings than *appropriate* and *suitable*. While *appropriate* and *suitable* means *right for something*, *proper* contains additional meanings which relate to *rule or social standards*

Furthermore, the results show that senses of meaning are also different. The meaning of *suitable* is more specific than that of *appropriate*. To clarify this, if something is *appropriate*, it means that the thing is right for something in *a general sense*. On the other hand, if something is *suitable*, it means that a particular thing *has the right qualities* for something.

As for entities these words are used with, *suitable* can be used with a person, while *appropriate* may not – no information shows that *appropriate* means *right for a person*. This implies that *suitable*, rather than *appropriate*, tends to be used more frequently with *person*.

Obviously, the results of this study show that *appropriate*, *proper*, and *suitable* do not have the same detailed meanings and senses of meanings; they cannot be used in all the same contexts. In terms of meanings, these three words can be, therefore, classified as *loose synonyms*, as suggested by Jackson and Amvela (2000).

Degree of formality

The results revealed that the Corpus of Contemporary American English (COCA) provides some information which is not shown by Longman Dictionary of Contemporary English (2014) and Longman Advanced American Dictionary 3rd edition (2013). Both Longman Dictionary of Contemporary English (2014) and Longman Advanced American Dictionary (2013) show only two points of information regarding degree of formality:

- 1) *Appropriate* is more formal than *suitable*.
- 2) *Proper + to* is formal.

However, the Corpus of Contemporary American English (COCA) does provide deeper insight into the degree of formality. The results are demonstrated in table 3:

Table 3

The comparisons between the total numbers and percentage of concordance lines of appropriate, proper, and suitable in all the five genres

Synonyms	Total concordance lines of each synonym: 300			
	Formal		Informal	
	number of lines	percent	number of lines	percent
Appropriate	212	70.67%	88	29.33%
Suitable	161	53.67%	139	46.33%
Proper	137	45.67%	163	54.33%

Table 3 clearly demonstrates that *appropriate*, *proper*, and *suitable* occur in both formal and informal contexts, yet the numbers of concordance lines of each word in formal and informal contexts are not the same. As for formal contexts, *appropriate* scores highest (212 lines), followed by *suitable* (161 lines), and *proper* (137 lines). On the other hand, for informal contexts, *appropriate* scores lowest (88 lines), while *proper* and *suitable* constitute 163 and 139 lines respectively.

This indicates that *appropriate*, *proper*, and *suitable* are not identical in terms of formality degree. Along the levels of formality, *appropriate* seems to be at the highest level, while *proper* seems to be at the opposite end. *Suitable*, however, seems to be in the middle between *appropriate* and *proper*. In other words, *appropriate* is more likely to be used more often in formal contexts than *proper* and *suitable*. By contrast, *proper* seems to be used less in formal contexts and more in informal contexts than *appropriate* and *suitable*.

Nevertheless, in terms of this criterion, it is clear that the pair *proper* and *suitable* are not as distinctly different as the pair *proper* and *appropriate*, and the pair *suitable* and *appropriate*. To clarify this, the number of concordance lines of each synonym makes up about 50% total lines in both formal and informal contexts. This shows that, although *proper* and *suitable* are different in terms of degree of formality, the difference is not so obvious as that between *appropriate* and *proper*, and that between *appropriate* and *suitable*.

Collocation

Palmer (1997) suggested that words in a set of synonyms tend to co-occur with particular words and are restricted by collocations. The results of this study clearly demonstrate that *appropriate*, *proper*, and *suitable* co-occur with the same and different noun and adverb collocates. In this study, noun and adverb collocates of these three synonyms were collected from Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), Macmillan Collocations Dictionary (2010), and the Corpus of Contemporary American English (COCA).

Table 4

Noun collocates of appropriate, proper, and suitable from Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), Macmillan Collocations Dictionary (2010), and the Corpus of Contemporary American English (COCA)

Synonyms	Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), and Macmillan Collocations Dictionary (2010)	The Corpus of Contemporary American English (COCA)
<i>Appropriate</i>	action, arrangements, measures, method, place, precautions, response, safeguards, time, treatment (10 collocates)	action, activities, amount, balance, behavior, degree, intervention, manner, means, name, number, point, reduction, services, time, use (16 collocates)
<i>Proper</i>	behavior, equipment, job, man, meals name, place, way (8 collocates)	way, place, role, care, attire, balance, training, use, dress, name, position, procedures, size, amount, artwork, burial, course, credit documentation, English, form, funeral, management, nutrition, operation, papers, precautions,

		punishment, relationship, respect (30 collocates)
<i>Suitable</i>	place, school, time (3 collocates)	candidate, education, habitat, host, housing, marriage, place, soil, time (9 collocates)

According to Table 4, it is clear that, for all the three synonyms, the Corpus of Contemporary American English (COCA) shows some noun collocates which are non-existent in the three dictionaries. It is obvious that *proper* has the highest number of noun collocates (8 from the dictionaries and 30 from the corpus), followed by *appropriate* (10 from the dictionaries and 16 from the corpus), and *suitable* (3 from the dictionaries and 9 from the corpus). This may be explained by the fact that *proper* covers more senses of meanings than *appropriate* and *proper*, as discussed in the previous criterion (meaning).

It was found that these three synonyms have some common noun collocates, as shown in table 5:

Table 5
Shared noun collates between appropriate, proper, and suitable

Shared Noun Collocates			
<i>appropriate</i> and <i>proper</i>	<i>proper</i> and <i>suitable</i>	<i>appropriate</i> and <i>suitable</i>	<i>appropriate</i> , <i>proper</i> , and <i>suitable</i>
place, precautions, behavior, name, amount, balance, use	place	place, time	place

It is apparent from table 5 that only a small number of noun collocates are shared, compared with the total noun collocates shown in Table 4. *Place* is the only noun collocate shared by all the three synonyms. It is clearly shown that *appropriate* and *proper* share up to 7 common noun collocates, while *appropriate* and *suitable* share only 2 noun collocates, and *proper* and *suitable* share only one noun collocate. The results seem to suggest that, in terms of noun collocation, *appropriate* seems to be closer to *proper* than to *suitable*.

Apart from noun collocates, adverb collocates of these three synonyms were sorted out. The results are shown in table 6:

Table 6
Adverb collocates of appropriate, proper, and suitable from Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), Macmillan Collocations Dictionary (2010), and the Corpus of Contemporary American English (COCA)

Synonyms	Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), and Macmillan Collocations Dictionary (2010)	The Corpus of Contemporary American English (COCA)
Appropriate	clinically, contextually, culturally, entirely, environmentally, highly, linguistically, particularly, perfectly, singularly, very , wholly (12 collocates)	culturally, developmentally, perfectly very (4 collocates)

Proper	entirely, only, perfectly, quite , very , wholly (6 collocates)	-
Suitable	eminently, entirely, equally, especially, entirely, extremely, generally, hardly, highly, ideally, normally, particularly, perfectly, potentially, quite , really , very (17 collocates)	very , equally (2 collocates)

As Table 6 illustrates, the dictionaries provide some adverb collocates of the three synonyms which do not appear in the Corpus of Contemporary American English (COCA).

This is probably due to the fact that collocates from the dictionaries are based on a larger amount of language data, whereas the corpus-based data in the present study is limited to only 300 concordance lines.

Most of the adverb collocates are found in Macmillan Collocations Dictionary (2010). Among all the adverb collocates, *quite*, *really*, *very* are considered weak collocates, because they can be used with any adjective in English. It was found that these three synonyms share some adverb collocates, as shown in table 7:

Table 7

Shared adverb collates between appropriate, proper, and suitable

Shared Adverb Collocates			
<i>appropriate and proper</i>	<i>proper and suitable</i>	<i>appropriate and suitable</i>	<i>appropriate, proper, and suitable</i>
entirely, perfectly, very* , wholly	entirely, perfectly, very* , quite*	highly, entirely, perfectly, very* , particularly,	entirely, perfectly, very*

Table 7 clearly demonstrates that each pair of synonyms, *appropriate* and *proper*, *proper* and *suitable*, and *appropriate* and *suitable* shares four to five adverb collocates. *Appropriate*, *proper*, and *suitable* share three adverb collocates: *entirely*, *perfectly*, and *very*. Most of these adverb collocates are adverbs of degree, such as *very*, which show the intensity or degree of a verb, adjective, or another adverb. However, not all adverb collocates are shared by these three synonyms. *Environmentally* and *linguistically* are examples of this kind of adverb. These two adverbs occur only with *appropriate*, not with *proper* or *suitable*. This indicates that the three synonyms do not occur with all the same adverb collocates.

It is, therefore, apparent from the findings that *appropriate*, *proper*, and *suitable* occur with different noun and adverb collocates. Although they share some collocates, those collocates represent only a small number of the whole. This suggests that, in terms of collocation, these three synonyms are not absolutely identical. However, it is important to bear in mind that not all possible collocates of these synonyms are shown in the four data sources; there may be more collocates outside these sources chosen for the present-study investigation.

**Very* and *quite* are considered *weak collocates* because these collocates are common and can be used with almost all adjectives in English.

Grammatical structures

In this study, *appropriate*, *proper*, and *suitable* were investigated for their shared grammatical structures. The results are presented in table 8:

Table 8

Shared grammatical structures of appropriate, proper, and suitable from Longman Dictionary of Contemporary English (2014), Longman Advanced American Dictionary (2013), Macmillan Collocations Dictionary (2010), and the Corpus of Contemporary American English (COCA)

Synonyms	Shared Grammatical Structures
<i>appropriate and proper</i>	<ol style="list-style-type: none"> 1) <i>appropriate/proper</i> + noun 2) linking v. + <i>appropriate/proper</i> + (for sb) + to + v.inf 3) linking v. + <i>appropriate/proper</i> + that 4) linking v. + <i>appropriate/proper</i> + to + sth 5) linking v. + <i>appropriate/proper</i> 6) noun + <i>appropriate/proper</i> + to + sth 7) as + <i>appropriate/proper</i> 8) (Omission of linking v.) + <i>appropriate/proper</i>
<i>appropriate and suitable</i>	<ol style="list-style-type: none"> 1) <i>appropriate/suitable</i> + noun 2) linking v. + <i>appropriate/suitable</i> + for sb/sth 3) linking v. + <i>appropriate/suitable</i> + to + v.inf 4) linking v. + <i>appropriate/suitable</i> + to + sth 5) linking v. + <i>appropriate/suitable</i> 6) v. + obj. + <i>appropriate/suitable</i> 7) as + <i>appropriate/suitable</i> 8) noun + <i>appropriate/suitable</i> + for + sth 9) linking v. + <i>appropriate/suitable</i> + for + v. ing 10) noun + <i>appropriate/suitable</i> + to + sth 11) obj. + s + v + <i>appropriate/suitable</i> 12) noun + past participle + <i>appropriate/suitable</i> 13) linking v. + <i>appropriate/suitable</i> + that 14) (Omission of linking v.) + <i>appropriate/suitable</i>
<i>proper and suitable</i>	<ol style="list-style-type: none"> 1) <i>proper/suitable</i> + noun 2) linking v. + <i>proper/suitable</i> + that 3) linking v. + <i>proper/suitable</i> + to + sth (formal) 4) linking v. + <i>proper/suitable</i> 5) linking v. + <i>proper/suitable</i> + to + v.inf 6) noun + <i>proper/suitable</i> + to + sth (formal) 7) as + <i>proper/suitable</i> 8) (Omission of linking v.) + <i>proper/suitable</i>

<i>appropriate, proper, and suitable</i>	1) <i>appropriate/proper/suitable</i> + noun
	2) linking v. + <i>appropriate/proper/suitable</i>
	3) noun + <i>appropriate/proper/suitable</i> + to + sth
	4) linking v. + <i>appropriate/proper/suitable</i> + (for sb) + to + v.inf
	5) linking v. + <i>appropriate/proper/suitable</i> + that
	6) linking v. + <i>appropriate/proper/suitable</i> + to + sth
	7) as + <i>appropriate/proper/suitable</i>
	8) (Omission of linking v.) + <i>appropriate/proper/suitable</i>

Table 8 demonstrates that these three synonyms share only eight grammatical structures. It is clear that the pair *appropriate* and *suitable* share the higher number of common grammatical patterns (14 structures) than the pair *appropriate* and *proper* (8 structures) and the pair *proper* and *suitable* (8 structures).

In addition, table 8 shows that *appropriate* and *suitable* can occur in all the grammatical structures of *proper*, but *proper* cannot occur in all structures of *appropriate* and *suitable*. Overall, the findings suggest that these three synonyms cannot be used interchangeably in all grammatical contexts because they do not share all the same grammatical structures. The results of this study are in line with what Phoocharoensil (2010) proposed, i.e. words in a set of synonyms, despite sharing a common core meaning, cannot be used in all the same grammatical patterns.

Nevertheless, it is possible that there may be some grammatical structures which are non-existent in the dictionaries and the 300 concordance lines used for the investigation in the present study.

Conclusion

This study has shown how the use of corpora can contribute to the study of synonyms. In this study, three synonyms, i.e. *appropriate, proper, and suitable*, were investigated to demonstrate the similarities and differences between these three words. The data were drawn from the three dictionaries and the Corpus of Contemporary American English. The findings suggest that *appropriate, proper, and suitable* share the same core meaning, but differ in terms of detailed meanings, degree of formality, collocation, and grammatical structures. The results also show that, mostly, the corpus provides some additional information which is non-existent in the three dictionaries. In addition, as for the benefits of English language teaching, this study has demonstrated that corpora can serve as a useful language teaching material. Students should be taught to be aware of the differences between words in a set of synonyms and should be provided with guidance as to how to differentiate words in a set of synonyms. They should be instructed to study data from learner's dictionaries and seek further information from corpus data. As a result of this, students will be able to distinguish synonyms in a set, using corpora and learner's dictionaries as the main learning tools.

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